



O&O  
2010

Owners' & Operators'  
Manual 2010



# 2010 Owners' & Operators'



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# A Message from the Chief of Naval Operations

It is my pleasure, once again, to introduce formally the “Owners’ and Operators” edition of *All Hands* magazine for 2010. This publication continues to serve as a useful resource to those who have great interest in what we do.

As the Chief of Naval Operations (CNO), it has been my privilege and pleasure to witness the extraordinary work you have done throughout the world and your continued commitment to being a global force for good. I am very proud of your dedication to our country, and I am honored to serve alongside you.

Today, our Navy is globally deployed, persistently forward and actively engaged with more than 50,000 of our shipmates deployed around the world. You bring our Maritime Strategy, “A Cooperative Strategy for 21st Century Seapower” alive. As we approach another year, we remain committed to building the future force, maintaining our warfighting readiness and developing and supporting our Sailors, Navy civilians and our families.

Throughout the year, our Navy has taken these focus areas and turned them into actions: launched the second littoral combat ship, commissioned the 10th and final *Nimitz*-class aircraft carrier, USS *George H.W. Bush* (CVN 77), rolled out the P-8A *Poseidon* Multi-Mission Maritime Aircraft and the F-35C *Lightning II*, Joint Strike Fighter in the same week, established the Fleet Cyber Command/U.S. 10th Fleet, treated more than 100,000 patients and performed more than 1,600 surgeries while participating in *Continuing Promise* in Caribbean, Central and South American nations, responded to the natural disasters in Indonesia, the Philippines and American Samoa, as well as participated in *Africa Partnership Station* and *Pacific Partnership*, observed our Navy SEALs and the crew of USS *Bainbridge* (DDG 96) disrupt pirate activities off the Horn of Africa and the rescue of the captain of *Maersk Alabama*, and enrolled the most diverse USNA and NROTC classes in history. These are just a few of our significant accomplishments and there will be many more in the years ahead.

My CNO guidance and its 18 intentions to guide the course of our Navy and enable us to measure our progress. This year, I am emphasizing the following five intentions: (1) continue to be the dominant, ready naval force across all maritime missions, (2) build a Navy with appropriate force structure and strategic lay down, (3) achieve decision superiority, (4) align the requirements, resources and acquisition processes and (5) evolve and establish international relationships.

We have done much and achieved many successes. As we move forward, we will focus on our core capabilities and work cooperatively with partners to pursue our common objectives. Continue to act with honor, live with courage and be committed to the highest standard of integrity. Your contributions as a Sailor, the service you provide, and the sacrifices you make are truly inspiring. I am extraordinarily proud of your dedication to the world’s finest Navy.

Thank you for continuing to make us the global force for good.



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# Navy Components

## NAVAL COMPONENT COMMANDS, NUMBERED FLEETS

The map depicts the unified commands' areas of operation (AO). The Navy supports regional unified commands with component commands and numbered fleets.

### U.S. Fleet Forces Command

**Headquarters:** Norfolk

**Mission:** United States Fleet Forces (USFF) organizes, mans, trains and equips Navy forces. USFF is the Navy component commander providing direct support to U.S. Joint Forces Command, U.S. Northern Command and U.S. Strategic Command. USFF's other primary responsibilities include determining and providing future and current needs of the fleet for warfighting and readiness capabilities to the Chief of Naval Operations. USFF strives to have an effectively prepared total Navy force by building a fleet with speed, endurance, global reach, unique capabilities and the operational agility to give a range of options to regional combatant commanders.

### U.S. Pacific Fleet

**Headquarters:** Pearl Harbor

**Mission:** U.S. Pacific Fleet (PACFLT) operates in support of the U.S. Pacific Command (PACOM) theater security strategy and provides interoperable, trained and combat-ready naval forces to PACOM and other U.S. combatant commanders as required. In addition to these traditional Title X responsibilities, PACFLT has a

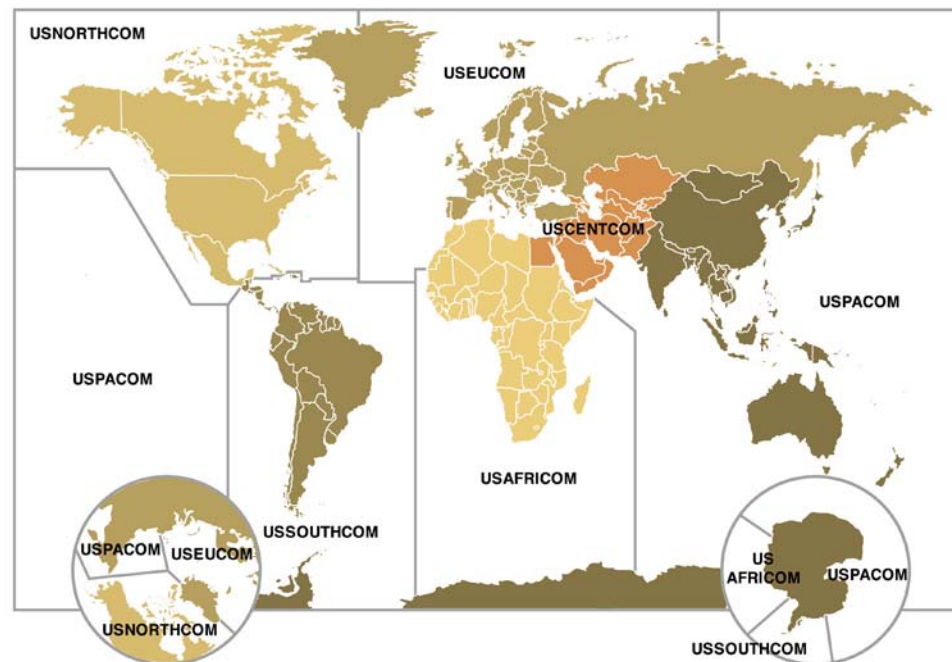
vital operational role as Commander, Joint Task Force 519. This mission requires PACFLT to not only maintain the training and readiness of the Joint Task Force Headquarters staff, but to also command the joint force during times of conflict, crisis or war.

As part of the nation's maritime strategy, PACFLT conducts humanitarian assistance and disaster relief efforts. *Pacific Partnership* is an annual mission by PACFLT involving partner nations, nongovernmental organizations and other groups working to provide medical and dental care, school and hospital repairs. PACFLT provides forward presence, deterrence, sea control, power projection and security for the Pacific Ocean, the world's largest maritime domain, covering one-third of the world's surface.

### U.S. 2nd Fleet

**Headquarters:** Norfolk

**Mission:** U.S. 2nd Fleet exercises delegated operational control and administrative control of assigned ships, aircraft and landing forces. Second Fleet plans for and, when directed, conducts maritime, joint and combined operations in support of designated unified and allied commanders.



Second Fleet trains, certifies and provides maritime forces to respond effectively to global contingencies.

**AO:** The North Atlantic Ocean

**Flagship:** Rotational

### U.S. 3rd Fleet

**Headquarters:** San Diego

**Mission:** U.S. 3rd Fleet delivers combat-ready naval forces, executes fleet operations and defines future fleet requirements to deter aggression, preserve freedom of the seas and promote peace and security.

**AO:** Pacific Ocean from the North Pole to the South Pole and from the continental West Coast to the International Date Line.

### U.S. Naval Forces Southern Command/U.S. 4th Fleet

**Headquarters:** Mayport, Fla.

**Mission:** U.S. Naval Forces Southern Command (NAVSO) is the Navy component commander for U.S. Southern Command (SOUTHCOM), which is headquartered in Miami. U.S. 4th Fleet is the numbered fleet assigned to NAVSO. NAVSO/4th Fleet directs U.S. Navy forces operating in the SOUTHCOM area of focus and interacts with Caribbean, Central and South American civil forces and navies to shape the maritime environment. Through theater security cooperation, NAVSO/4th Fleet works to build and strengthen



relations, develop partner nation capabilities and maintain maritime access to defend southern approach to the United States in support of the maritime strategy.

NAVSO/4th Fleet also provides operational control for U.S. Navy units supporting joint and interagency efforts in counter-illicit trafficking operations, and efforts to stem the flow of illegal migration.

**AO:** Caribbean Sea, Eastern Pacific and South Atlantic waters surrounding 31 countries and 12 dependencies, and covering about 15.6 million square miles.

## U.S. Naval Forces Central Command/U.S. 5th Fleet/ Combined Maritime Forces

**Headquarters:** Manama, Bahrain

**Mission:** U.S. Naval Forces Central Command (COMUSNAVCENT)/5th Fleet is the naval component command for U.S. Central Command and conducts maritime operations to help ensure security and stability throughout the region, promote U.S. interests, prevent regional conflict and defeat our adversaries. COMUSNAVCENT acts in concert with other Central Command components, the Combined Maritime Forces and joint task forces to deter destabilizing activities and promote a lawful maritime order in the Central Command Area of Responsibility (AOR).

U.S. and coalition forces conduct missions in support of Operations *Enduring Freedom* and *Iraqi Freedom* as well as maritime security operations in the Arabian Gulf, Arabian Sea and Red Sea and off the coast of Somalia.

Operations in the NAVCENT area are focused on reassuring regional partners of the United States' commitment to security, which promotes stability and global prosperity. These operations protect maritime infrastructure, deter and

disrupt piracy, prevent drug and weapons smuggling and deny violent extremists use of the maritime environment as a venue for attack.

**AO:** Approximately 5 million square miles, including the Arabian Gulf, Gulf of Oman, Arabian Sea, Gulf of Aden, Red Sea and parts of the Indian Ocean. This expanse, comprised of 22 countries, includes three critical chokepoints at the Strait of Hormuz, the Suez Canal and the Strait of Bab al Mandeb at the southern tip of Yemen.

## U.S. Naval Forces Europe/Naval Forces Africa/U.S. 6th Fleet

**Headquarters:** Naples, Italy.

**Mission:** U.S. Naval Forces Europe/Naval Forces Africa/U.S. 6th Fleet (CNE-C6F) is the maritime arm of European Command (EUCOM) and Africa Command (AFRICOM) responsible for supporting National Military Strategy and the strategic objectives of EUCOM, AFRICOM and the Chief of Naval Operations. CNE-C6F provides overall command, operational control and coordination of U.S. naval forces in the EUCOM and AFRICOM areas of responsibility.

Providing presence with a purpose, CNE-C6F follows a peacetime engagement plan focusing on exercises and operations that improve interoperability and increase regional maritime security among European and African nations. U.S. naval forces in Europe and Africa remain committed to building emerging partnerships' maritime safety and security capabilities while positively shaping the environment "south and east" to deny maritime criminals, terrorists or any other destabilizing element freedom of action.

**AO:** More than 21 million square miles including 92 countries and territories and a population of more than 1 billion people. This territory extends from the Cape of

Norway through the waters of the Baltic, Black and Mediterranean Seas, most of Europe, parts of the Middle East to the Cape of Good Hope in South Africa.

**Flagship:** *USS Mount Whitney* (LCC/JCC 20)

## U.S. 7th Fleet

**Headquarters:** Yokosuka, Japan

**Mission:** The U.S. 7th Fleet operates in the largest area of responsibility of the Navy's numbered fleets. U.S. naval forces have maintained a continuous forward presence in this region for more than a century and a half, directly supporting U.S. national interests, upholding key alliances, and expanding maritime partnerships. The U.S. 7th Fleet employs both forward and rotationally deployed ships, aircraft, submarines and other maritime forces independently or as part of a joint, combined or multinational force, executing military operations across the spectrum, from major combat operations to humanitarian assistance and disaster relief.

Seventh Fleet forces operate in the region on a continuous basis and obtain critical "local knowledge" – increasing opportunities to train and operate with our allies, friends and partners, while allowing for rapid response to any crisis, natural or manmade. The 7th Fleet AOR is home to more than 50 percent of the world's population, speaking more than 3,000 languages and includes two of the world's largest economies (China and Japan).

**AO:** Forty-eight million square miles of the Pacific and Indian oceans, from the International Date Line to the waters east of Africa, and from the Kuril Islands in the north to the Antarctic in the south, including 39 coastal nations.

**Flagship:** *USS Blue Ridge* (LCC 19)

## U.S. Fleet Cyber Command/U.S. 10th Fleet

**Headquarters:** Fort George G. Meade, MD

**Mission:** U.S. Fleet Cyber Command (FLTCYBERCOM) will be the Navy's service component to the proposed U.S. Cyber Command (USCYBERCOM), and will execute the operational missions assigned to the Navy by U.S. Strategic Command and USCYBERCOM. As the Navy's principal point of action for cyber warfare, information operations and space, to include computer network operations, U.S. 10 Fleet (C10F) will partner with and support other fleet commanders to provide guidance and direction to ensure coordinated, synchronized, and effective preventative and response capability in cyberspace.

FLTCYBERCOM/C10F unifies Navy's ability to implement DoD cyberspace policy and strategy at the convergence of sea power and cyber power as well as increases our ability to prevent and respond to cyber threats. It brings unity of effort for cyberspace integration into planning and operations to support commanders' warfighting requirements by creating capabilities that complement kinetic options. FLTCYBERCOM/C10F will work closely with Joint and interagency partners to develop offensive and defensive cyberspace capabilities, infrastructure, experience, and access, posturing our Navy to reduce risks associated with cyber threats while at the same time offering opportunities for our Navy to continue leverage the advantages of cyberspace.

**AO:** Worldwide

# Bases

## COMMANDER, NAVY INSTALLATIONS COMMAND

### UNITED STATES

#### California

Naval Air Weapons Station (NAWS)  
China Lake  
Naval Air Facility (NAF) El Centro  
Naval Air Station (NAS) Lemoore  
Naval Base (NAVBASE) Coronado  
NAVBASE Ventura County  
Naval Station (NAVSTA) San Diego  
Naval Weapons Station (NWS) Seal  
Beach  
Naval Post Graduate School  
NAVBASE Point Loma

#### Connecticut

Naval Submarine Base (SUBASE) New  
London

#### District of Columbia (Navy District Washington)

Naval Support Activity (NSA)  
Washington  
Washington Navy Yard  
NSA North Potomac  
NSA South Potomac

#### Florida

NAS Jacksonville  
NAS Key West  
NAS Whiting Field  
NAS Pensacola  
NAVSTA Mayport  
NSA Panama City  
NSA Orlando

#### Georgia

NAS Atlanta  
SUBASE Kings Bay

#### Hawaii

NAVSTA Pearl Harbor  
Pacific Missile Range Facility, Kauai

#### Illinois

NAVSTA Great Lakes

#### Indiana

NSA Crane

#### Louisiana

NAS Joint Reserve Base (JRB) New  
Orleans  
NSA New Orleans

#### Maryland

NAS Patuxent River  
NSA Annapolis

#### Mississippi

Naval Construction Battalion Center  
Gulfport  
NAS Meridian

#### Nevada

NAS Fallon

#### New Jersey

Naval Air Engineering Station,  
Lakehurst  
NWS Earle

#### New York

Naval Support Unit Saratoga  
Springs

#### Pennsylvania

NAS JRB Willow Grove  
NSA Mechanicsburg

#### Rhode Island

NAVSTA Newport

#### South Carolina

NWS Charleston

#### Tennessee

NSA Mid-South Millington

#### Texas

NAS Corpus Christi  
NAS JRB Fort Worth  
NAS Kingsville  
NAVSTA Ingleside

#### Virginia

Joint Expeditionary Base Little Creek -  
Fort Story  
NAS Oceana  
NAVSTA Norfolk  
NSA Norfolk, North Annex  
NWS Yorktown  
NSA Norfolk Naval Shipyard  
NWS Yorktown  
Dam Neck Annex  
Cheatham Annex

#### Washington State

NAS Whidbey Island  
NAVBASE Kitsap  
NAVSTA Everett  
Naval Magazine Indian Island

#### West Virginia

Naval Security Group, Activity  
Sugar Grove

### WORLDWIDE

#### Bahrain

NSA Bahrain

#### Cuba

NAVSTA Guantanamo Bay

#### Diego Garcia

Navy Support Facility Diego Garcia  
Indian Ocean

#### Djibouti

Camp Lemonnier, Djibouti

#### Greece

NSA Souda Bay

#### Guam

Joint Base Guam

#### Italy

NAS Sigonella  
NSA Naples

#### Japan

NAF Atsugi  
NAF Misawa  
Commander Fleet Activities (CFA)  
Yokosuka  
CFA Sasebo  
CFA Kadena Okinawa

#### Korea

CFA Chinhae

#### Singapore

Navy Region Center, Singapore

#### Spain

NAVSTA Rota

(Source: CNIC)

# Fleet and Family Support

The Fleet & Family Readiness (F&FR) program at Commander, Navy Installations Command (CNIC) is responsible for policy development, resourcing and oversight of quality of life programs for Sailors and their families. F&FR enables a ready Navy force through programs such as family readiness, fleet readiness and housing programs.

## FAMILY READINESS

More than 80 Fleet and Family Support Centers throughout the fleet provide Sailors and their families access to services, resources, counseling and education. Some of their offerings are:

- Deployment Readiness Workshops
- Ombudsman programs
- Personal Financial Management program
- New Parent Support Home Visitation program
- Transition Assistance program
- Family Employment Readiness program
- Relocation Assistance program
- Clinical Counseling Services
- Family Advocacy program
- Sexual Assault Victim Intervention program
- Life Skills Workshops
- Child & Youth programs

To submit an online request for care, go to [www.mwr.navy.mil](http://www.mwr.navy.mil), click on “Child and Youth” and “I need Childcare.”

For more information about these and other programs go to <https://www.nffsp.org/skins/nffsp/home.aspx>.

## FLEET READINESS

### Fitness, Sports and Deployed Forces

The Navy’s Morale, Welfare and Recreation (MWR) services offer programs to help Sailors shape up and stay fit. Among these programs are:

- Deployed Forces Support program
- Deployed Forces Support Coordinators
- The Navy’s MWR Civilian Afloat program (fit bosses/fun bosses)
- All-Navy Sports program

More information can be found at [www.mwr.navy.mil](http://www.mwr.navy.mil)

## HOUSING

The CNIC F&FR Housing program is focused on ensuring that service members, both single and those with families, receive adequate and affordable housing worldwide, whether provided by the local, private community or under government sponsorship.

For more information on Navy Private Public Venture housing, visit Navy Housing OneStop, the one-stop source for Navy Housing worldwide, at <https://www.housing.navy.mil/onestop>.



Photo by MC3 Joseph M. Sullivan

Television personality Leeann Tweeden gives an autograph to ASAN John Palacio during a USO Summer Troop Visit aboard USS Ronald Reagan (CVN 76), while in the Gulf of Oman.

## OTHER SERVICES AVAILABLE TO FLEET AND FAMILIES

- Navy Gateway Inns and Suites
- Information, tickets and travel
- Liberty (single Sailor) program
- Marinas
- Golf courses
- Outdoor recreation centers
- Base library and movie theaters
- MWR cabins, camping sites and RV parks

For more information visit [www.mwr.navy.mil](http://www.mwr.navy.mil).

## NAVY FAMILY ACCOUNTABILITY AND ASSESSMENT SYSTEM (NFAAS)

When disaster strikes, Sailors and their families must report their status through NFAAS. This is a Web-based standardized method for the Navy to account, assess, manage and monitor the recovery process for personnel and their families affected and/or scattered by a widespread catastrophic event.

For more information about NFAAS, visit <https://navyfamily.navy.mil>.



# Navy Medicine

## REGIONAL MEDICAL COMMANDS, HOSPITALS

National Naval Medical Center, Bethesda, Md.  
Naval Medical Center (NMC) Portsmouth, Va.  
NMC San Diego

## Other Facilities Include:

Nine CONUS Naval Hospitals  
Seven OCONUS Naval Hospitals  
Eight CONUS Naval Health Clinics  
Two OCONUS Naval Health Clinics  
119 Branch Medical Clinics  
Six CONUS Dental Clinics  
Two OCONUS Dental Clinics  
Six CONUS Research Commands  
Three OCONUS Research Commands  
Five DoD Health Care Schools

## Military Sealift Command Hospital Ships:

USNS *Mercy* (T-AH 19), homeport San Diego  
USNS *Comfort* (T-AH 20), homeport Baltimore  
(Source: Bureau of Navy Medicine)



Lt. Cmdr. Rodney Scott, a dentist at the Emergency Medical Facility, Camp Lemonnier, Djibouti, prepares a amalgam filling as his assistant, HM3 Shaunta Johnson, watches over a patient.

## By the Numbers

|                 |              |                  |              |                               |              |                |              |                           |               |
|-----------------|--------------|------------------|--------------|-------------------------------|--------------|----------------|--------------|---------------------------|---------------|
| <b>Doctors:</b> | <b>4,351</b> | <b>Dentists:</b> | <b>1,277</b> | <b>Medical Service Corps:</b> | <b>2,648</b> | <b>Nurses:</b> | <b>3,965</b> | <b>Hospital Corpsmen:</b> | <b>28,631</b> |
| Active Duty     | 3,792        | Active Duty      | 1,032        | Active Duty                   | 2,320        | Active Duty    | 2,838        | Active Duty               | 23,812        |
| Reservists      | 559          | Reservists       | 245          | Reservists                    | 328          | Reservists     | 1,127        | Reservists                | 4,819         |

(Source: Bureau of Navy Medicine)



# Navy Medicine Resources

## **SAFE HARBOR: COMPREHENSIVE CARE FOR WOUNDED, ILL OR INJURED SAILORS**

The mission of Safe Harbor is comprehensive casualty care, from pay issues to rehabilitation, for seriously injured personnel and their families. More information is available at [www.safeharbor.navy.mil](http://www.safeharbor.navy.mil) or toll-free at 1-877-746-8563.

## **OPERATIONAL STRESS CONTROL RESOURCES**

Navy Operational Stress Control (OSC) is a program supported by Navy Medicine. The foundation of OSC is the Stress Continuum Model which provides Sailors, leaders, and family members a visual tool for assessing stress responses and practical steps to take to mitigate stress injuries. For more information, see <https://wwwa.nko.navy.mil/portal/operationstresscontrol/operationstresscontrol>.

The Naval Center for Combat and Operational Stress Control (NCCOSC) was created to improve the psychological health of Navy and Marine Corps forces through training, education, care system improvement and facilitating research and information distribution. For more information see, [www.nccosc.navy.mil](http://www.nccosc.navy.mil)

## **Project FOCUS**

Project FOCUS, is Families OverComing Under Stress (FOCUS) is designed for families needing to ramp up their resiliency to best handle the demands of deployment and combat and operational stress. Through parent, child and family sessions, FOCUS helps Navy and Marine families develop strong skills in problem solving, goal setting, communication and emotional regulation. The free program is offered through the Navy Bureau of Medicine and Surgery in collaboration with University of California - Los Angeles. For details and a list of FOCUS locations, see [www.focusproject.org](http://www.focusproject.org) or call 310-794-2482.

## **Military OneSource**

Military OneSource is a DoD program offering a variety of services to service members and their families. Its many services include 12 free counseling sessions per service member or family member, per issue; sessions are conducted 24/7 in person, on the phone or online. Complete information is available at [www.MilitaryOneSource.com](http://www.MilitaryOneSource.com) or by calling 800-342-9647.

## **Returning Warrior Workshops**

Making a successful transition from the war zone to the home front is the focus of Returning Warrior Workshops (RWW), a well-received program for Navy and Marine Corps Reservists. The workshops are expense-paid weekend events for up to 200 service members and their spouses or significant others. In addition to presentations from senior military leaders who have been in combat, there are breakout sessions where participants discuss — and help learn to resolve — stressful situations arising in deployment and reintegration. A number of support services are available at the workshops along with counselors, psychological health outreach coordinators and chaplains to assist service members in re-acclimating with their families and to civilian life.

For more information on workshops in your area, go to [www.ia.navy.mil/rww\\_dates.pdf](http://www.ia.navy.mil/rww_dates.pdf).

## **TRICARE**

TRICARE, the civilian-care component of the Military Health System, recently launched the TRICARE Assistance Program (TRIAP), a free Web-based service for psychological health services. Available to active-duty service members and their families, TRIAP uses audiovisual telecommunications systems, such as video chat and instant messaging. Assistance counselors are on hand around-the-clock for nearly any behavioral health issue, and a referral or prior authorization is not required. For complete information, see [www.tricare.mil/TRIAP](http://www.tricare.mil/TRIAP).

## **Additional Resources can be found at:**

- Navy Suicide Prevention Program Web site: [www.suicide.navy.mil](http://www.suicide.navy.mil).
- Combat operational stress control/management, resiliency materials and programs designed specifically for the Navy population are accessible at [www-nmcphe.med.navy.mil/Healthy\\_Living/Psychological\\_Health/Stress\\_Management/operandcombatstress.aspx.8](http://www-nmcphe.med.navy.mil/Healthy_Living/Psychological_Health/Stress_Management/operandcombatstress.aspx.8)

# Pay & Benefits

## Family Separation Allowance

Family Separation Allowance (FSA) compensates qualified members for added expenses incurred because of an enforced family separation. There are three different categories depending on the status of the Sailor and their family members. Family separation allowance is \$250 per month. See the DoD Financial Management Regulation (FMR) Volume 7A, Chapter 27 for more information.

## Overseas Tour Extension Incentive Program

The Overseas Tour Extension Incentive Program offers eligible enlisted members the opportunity to receive their choice of one of four incentive options for extension of the DoD tour length for 12 months or more. For more information see a command career counselor or MILPERSMAN Article 1306-300.

## Hardship Duty Pay

Hardship Duty Pay is payable to members who are entitled to basic pay while performing duty designated by the Secretary of Defense as hardship duty. Current rates and locations are maintained in the DoD FMR, 7A, 17.

## Combat Zone Tax Exclusion

Combat Zone Tax Exclusion allows earnings received while performing duties in, or in direct support of, areas designated

as combat zones to be excluded from taxes. Exclusion is unlimited for enlisted members and warrant officers. Visit [http://www.defenselink.mil/militarypay/pay/tax/10\\_combatzone\\_05.html](http://www.defenselink.mil/militarypay/pay/tax/10_combatzone_05.html) and DoD FMR, 7A, 44, for more information.

## Imminent Danger Pay, Hostile Fire Pay

Imminent Danger Pay (IDP) is a threat-based pay, meaning it is payable for any month the member performs duty in an IDP area (designated by DoD). Hostile Fire Pay (HFP) is an event-based pay, meaning the member is exposed to an actual occurrence of hostile fire or an explosion of hostile mine. The rate of IDP/HFP is \$225 per month. Designated areas are listed in DoD FMR, 7A, 10.

## Sea Duty Incentive Pay

Sea Duty Incentive Pay (SDIP) offers extra pay of up to \$750 per month for extension and early return to sea (voluntary curtailment of shore duty). For more information on SDIP, visit the Navy Personnel Command (NPC) Web site [www.npc.navy.mil](http://www.npc.navy.mil) and select “Career Info,” “Pay and Benefits” and “SDIP.”

## Special Duty Assignment Pay

Special duty assignment pay (SDAP) is a monthly incentive pay to sustain manning levels and obtain high quality enlisted personnel for designated special

duty assignments. For more information on SDAP, visit the NPC website ([www.npc.navy.mil](http://www.npc.navy.mil)) select “Career Info,” “Enlisted Career Progression,” “Incentives” and scroll to “SDAP.”

## Critical Skills Retention Bonus

Critical Skills Retention Bonus (CSRB) is used to ensure essential skills remain in military service. When a critical skill becomes scarce, DoD offers a financial incentive – some bonuses are \$20,000 or more. For more information, contact your command career counselor or your enlisted community manager.

## Career Sea Pay, Career Sea Pay Premium

Career Sea Pay (CSP) and CSP premium are entitlements to compensate service members for the inherent dangers of sea duty and incentivize consecutive sea service greater than 36 months. For info, see Military Personnel Manual (MILPERSMAN) article 7220-060.

## Assignment Incentive Pay

Assignment incentive pay (AIP) incentivizes traditionally hard-to-fill assignments or less desirable geographic locations. For more AIP information including a listing of locations eligible for AIP, visit the NPC Web site ([www.npc.navy.mil](http://www.npc.navy.mil)) select “Career Info,” “Pay and Benefits” and “AIP.”

## Foreign Language Proficiency Bonus

Sailors skilled in a foreign language may be eligible for a foreign language proficiency bonus of up to \$500 per month for demonstrated proficiency in a foreign language or a maximum \$1,000 per month for more than one foreign language. Refer to OPNAVINST 7220.7F and NAVADMINs 143/06, 252/06, 072/07, and 156/08 for specific eligibility criteria.

## Basic Allowance for Housing

Basic allowance for housing (BAH) reduces out-of-pocket expense for off-base living. This non-taxable allowance generally covers rent, utilities and renter’s insurance. For details visit <http://www.defenselink.mil/militarypay/pay/bah/>.

## Basic Allowance for Subsistence

Basic allowance for subsistence (BAS) is adjusted annually based on the cost of food. For details on 2010 rates, visit [www.defenselink.mil/militarypay/pay/bas/index.html](http://www.defenselink.mil/militarypay/pay/bas/index.html).



Photo by MC3 Kevin Murphy

Sailors take the fleetwide E-4 advancement exam in the aft mess decks aboard USS *John C. Stennis* (CVN 74), while underway off the coast of California.

to [www.fns.usda.gov/fns/](http://www.fns.usda.gov/fns/) or <https://www.dmdc.osd.mil/fssa>.

### Federal Tax Advantage

Because some allowances are not taxable, the result is actually additional compensation. Untaxed allowances include BAS, BAH, overseas housing allowance, cost-of-living allowance and FSA. Further tax advantages are available through participation in the Uniformed Services Thrift Savings Plan (TSP). See the pay and compensation calculator at [www.npc.navy.mil/CareerInfo/StayNavyTools/](http://www.npc.navy.mil/CareerInfo/StayNavyTools/) or choose the calculator on [www.defenselink.mil/militarypay/pay/bp/index.html](http://www.defenselink.mil/militarypay/pay/bp/index.html).

### Military Pay Raises

Annual military pay raises are linked to the employment cost index (ECI). Military pay raises are equal to a yearly increase in the ECI. But, pay raises may (and usually do) exceed these levels if authorized and funded by Congress. See [www.defenselink.mil/militarypay/pay/bp/05\\_annualraise.html](http://www.defenselink.mil/militarypay/pay/bp/05_annualraise.html).

### Savings Deposit Program

The Savings Deposit Program (SDP) is allowed for Sailors during assignments and deployments to specified locations. SDP pays 10 percent interest and allows Sailors to deposit a portion of current pay, up to a maximum of \$10,000. Interest paid on SDP

is taxable and rules apply. For information, contact the local finance office prior to deployment.

### Family Subsistence Supplemental Allowance in addition to BAS

Family Subsistence Supplemental

Allowance, in addition to BAS, is an additional food allowance some large military families may qualify for and is based on total household income. Contact the fleet and family support center or a command financial specialist for assistance in determining eligibility. For details, go



# Pay & Benefits

## Medical and Dental

The TRICARE medical plan is one of the benefits afforded active and Reserve families. TRICARE is a regionally managed health care program. Contact a health care benefits advisor at your nearest military treatment facility or Navy Reserve activity. For additional information see [www.tricare.mil](http://www.tricare.mil).

## Military Leave and Liberty

Active-duty members accumulate two-and-a-half days leave per month, totaling 30 days of paid leave each year. While earned leave is intended for use throughout the year, members may carry forward leave not to exceed 75 days at the end of the fiscal year (this carryover eligibility ends Dec. 31, 2010, when leave carryover resets to 60 days).

## Navy Exchange/Commissary

The Navy Exchange Service Command (NEXCOM) manages tax-free, discounted shopping for quality goods and also manages Navy Lodges, ship's stores, and other programs. For more information visit the Navy Exchange Web site at [www.navy-nex.com/](http://www.navy-nex.com/). The Defense Commissary Agency operates a worldwide chain of grocery stores serving military personnel, retirees and their families in a safe and secure shopping environment. Shoppers save an average of more than 30 percent on their purchases which is worth about \$3,000 annual savings for a family of four. For more information

visit the Commissary Web site at [www.commissaries.com](http://www.commissaries.com).

## Retirement Pay

One of the most attractive incentives of a military career is the retirement system that provides lifelong retirement income for those who serve 20 or more years. Active duty and Reserve retirement plans differ. To view retirement plans and an easy-to-use online calculator visit [www.npc.navy.mil/CareerInfo/StayNavyTools](http://www.npc.navy.mil/CareerInfo/StayNavyTools) or [www.defenselink.mil/militarypay/pay/bp/index.html](http://www.defenselink.mil/militarypay/pay/bp/index.html) and then choose the calculator.

## Thrift Savings Plan

The Thrift Savings Plan is a 401(k)-like savings plan for Sailors. It accumulates long-term, tax-deferred savings and earnings for a retirement nest egg, regardless of whether the Sailor remains for a full military career. Useful information can be found at: [www.tsp.gov/](http://www.tsp.gov/).

## Certifications/NAVY COOL

The Navy's Credentialing Opportunities On-Line (COOL) identifies civilian credentials that best map to a Sailor's rating and training. The COOL Web site guides Sailors seeking training paths and funding toward industry-recognized, professional certification and licensure exams. This tool helps ensure Sailors have career opportunities within the Navy, as well as a successful follow-on career when they transition to the civilian workforce.

For more information on Navy COOL visit <https://www.cool.navy.mil>.

## Navy Personnel Command Customer Service Center

The Navy Personnel Command (NPC) Customer Service Center (CSC) is the one-stop shop for all questions. If unsure about who to contact or where to go, call 1-866-U-ASK-NPC (1-866-827-5672) and let the customer service agents help you, or visit the CSC Web page at <http://www.npc.navy.mil/AboutUs/NPC/CSC/>. E-mail questions can be sent to [CSCMailbox@navy.mil](mailto:CSCMailbox@navy.mil).

## THE BALANCING ACT – NAVY ASSISTANCE FOR SAILORS' LIVES New pregnancy/adoption policy

Known as the postpartum operational deferment, the June 2007 revision of the Pregnancy and Parenthood Instruction (OPNAVINST 6000.1C) authorized an extension of current operational deferment from four to 12 months for new mothers. The increased operational deferment policy allows more time for families to arrange long-term child care. For more, see the Women's Policy Web site at [www.npc.navy.mil/AboutUs/BUPERS/WomensPolicy/](http://www.npc.navy.mil/AboutUs/BUPERS/WomensPolicy/).

## Adoption leave

Navy families are authorized up to 21 days of non-chargeable administrative leave for parents who adopt children in a DoD-

qualified adoption. Details are covered in OPNAVINST 6000.1C Section 202.

## Paternity leave

Male service members are now able to take up to 10 days of administrative when their spouse gives birth to a child. The leave must be used within 60 days of the birth or return from deployment. For more information, see NAVADMIN 341/08.

(Source: Navy Personnel Command)



# Proposed 2010 Navy Monthly Pay

## Years of Service

### Pay Grade

|   | <2       | 2        | 3        | 4        | 6         | 8         | 10        | 12        | 14        | 16        | 18        | 20        | 22        | 24        | 26        |
|---|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Enlisted Members</b>   |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |
| <b>E-9</b>  | 0        | 0        | 0        | 0        | 0         | 0         | 4,570.80  | 4,674.30  | 4,804.80  | 4,958.40  | 5,112.90  | 5,361.50  | 5,571.30  | 5,792.40  | 6,129.90  |
| <b>E-8</b>  | 0        | 0        | 0        | 0        | 0         | 3,741.60  | 3,907.20  | 4,009.50  | 3,132.50  | 4,265.40  | 4,505.40  | 4,626.90  | 4,833.90  | 4,948.50  | 5,231.40  |
| <b>E-7</b>  | 2,601.00 | 2,838.90 | 2,947.50 | 3,091.80 | 3,204.00  | 3,396.90  | 3,505.50  | 3,699.00  | 3,859.50  | 3,969.00  | 4,085.70  | 4,131.30  | 4,282.80  | 4,364.40  | 4,674.60  |
| <b>E-6</b>  | 2,249.70 | 2,475.30 | 2,584.50 | 2,690.70 | 2,801.40  | 3,051.00  | 3,148.20  | 3,336.00  | 3,393.60  | 3,435.60  | 3,484.50  | 3,484.50  | 3,484.50  | 3,484.50  | 3,484.50  |
| <b>E-5</b>  | 2,061.30 | 2,199.30 | 2,305.50 | 2,414.40 | 2,583.90  | 2,761.80  | 2,906.70  | 2,924.70  | 2,924.70  | 2,924.70  | 2,924.70  | 2,924.70  | 2,924.70  | 2,924.70  | 2,924.70  |
| <b>E-4</b>  | 1,889.70 | 1,986.30 | 2,094.00 | 2,199.90 | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  | 2,293.80  |
| <b>E-3</b>  | 1,705.80 | 1,813.20 | 1,923.00 | 1,923.00 | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  | 1,923.00  |
| <b>E-2</b>  | 1,622.10 | 1,622.10 | 1,622.10 | 1,622.10 | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  | 1,622.10  |
| <b>E-1</b>  | 1,447.20 | 1,447.20 | 1,447.20 | 1,447.20 | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  | 1,447.20  |
| <i>E-1 with less than four months: 1,294.50</i>   |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |
| <b>Warrant Officers</b>   |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |
| <b>W-5</b>  | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 6,726.60  | 7,068.00  | 7,322.10  | 7,603.50  |
| <b>W-4</b>  | 3,783.00 | 4,069.50 | 4,186.50 | 4,301.10 | 4,499.10  | 4,695.00  | 4,893.00  | 5,191.80  | 5,453.40  | 5,702.10  | 5,905.50  | 6,104.10  | 6,396.00  | 6,635.40  | 6,909.00  |
| <b>W-3</b>  | 3,454.50 | 3,598.50 | 3,746.10 | 3,794.70 | 3,949.50  | 4,254.00  | 4,571.10  | 4,730.10  | 4,892.70  | 5,070.90  | 5,390.40  | 5,606.70  | 5,736.00  | 5,873.40  | 6,060.00  |
| <b>W-2</b>  | 3,057.00 | 3,346.20 | 3,435.30 | 3,496.50 | 3,694.80  | 4,002.90  | 4,155.30  | 4,305.90  | 4,489.50  | 4,633.20  | 4,763.40  | 4,918.80  | 5,021.40  | 5,102.70  | 5,102.70  |
| <b>W-1</b>  | 2,683.50 | 2,971.80 | 3,049.80 | 3,213.90 | 3,398.10  | 3,694.20  | 3,827.70  | 3,014.30  | 4,197.90  | 4,342.20  | 4,475.40  | 4,636.80  | 4,636.80  | 4,636.80  | 4,636.80  |
| <b>Commissioned Officers</b>  |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |
| <b>O-10</b>   | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 15,188.10 | 15,262.20 | 15,579.60 | 16,132.50 |
| <b>O-9</b>  | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 13,283.70 | 13,475.10 | 13,751.40 | 14,233.80 |
| <b>O-8</b>  | 9,399.00 | 9,706.80 | 9,911.10 | 9,968.40 | 10,223.40 | 10,649.10 | 10,748.40 | 11,152.80 | 11,268.60 | 11,617.20 | 12,121.20 | 12,586.20 | 12,896.70 | 12,896.70 | 12,896.70 |
| <b>O-7</b>  | 7,809.90 | 8,172.90 | 8,340.60 | 8,474.10 | 8,715.60  | 8,954.40  | 9,230.40  | 9,505.50  | 9,781.80  | 10,649.10 | 11,381.40 | 11,381.40 | 11,381.40 | 11,381.40 | 11,439.30 |
| <b>O-6</b>  | 5,788.50 | 6,359.40 | 6,776.70 | 6,776.70 | 6,802.50  | 7,094.10  | 7,132.50  | 7,132.50  | 7,537.80  | 8,254.80  | 8,675.40  | 9,095.70  | 9,334.80  | 9,577.20  | 10,047.00 |
| <b>O-5</b>  | 4,825.50 | 5,436.00 | 5,812.50 | 5,883.30 | 6,117.90  | 6,258.60  | 6,567.60  | 6,794.10  | 7,086.90  | 7,535.10  | 7,748.10  | 7,959.00  | 8,198.40  | 8,198.40  | 8,198.40  |
| <b>O-4</b>  | 4,163.70 | 4,819.80 | 5,141.40 | 5,213.10 | 5,511.60  | 5,831.70  | 6,230.10  | 6,540.60  | 6,756.60  | 6,880.20  | 6,951.90  | 6,951.90  | 6,951.90  | 6,951.90  | 6,951.90  |
| <b>O-3</b>  | 3,660.60 | 4,149.90 | 4,479.30 | 4,883.40 | 5,117.10  | 5,373.90  | 5,540.10  | 5,813.40  | 5,955.60  | 5,955.60  | 5,955.60  | 5,955.60  | 5,955.60  | 5,955.60  | 5,955.60  |
| <b>O-2</b>  | 3,162.90 | 3,602.40 | 4,149.00 | 4,289.10 | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  | 4,337.30  |
| <b>O-1</b>  | 2,745.60 | 2,857.50 | 3,454.20 | 3,454.20 | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  | 3,454.20  |
| <b>Commissioned Officers (with more than four years of active service as an Enlisted Member or Warrant Officer)</b> |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |
| <b>O-3E</b>   | 0        | 0        | 0        | 4,883.40 | 5,117.10  | 5,373.90  | 5,540.10  | 5,813.40  | 6,043.50  | 6,175.80  | 6,355.80  | 6,355.80  | 6,355.80  | 6,355.80  | 6,355.80  |
| <b>O-2E</b>   | 0        | 0        | 0        | 4,289.10 | 4,377.30  | 4,516.80  | 4,752.00  | 4,933.80  | 5,069.10  | 5,069.10  | 5,069.10  | 5,069.10  | 5,069.10  | 5,069.10  | 5,069.10  |
| <b>O-1E</b>   | 0        | 0        | 0        | 3,454.20 | 3,688.80  | 3,825.00  | 3,964.80  | 4,101.60  | 4,289.10  | 4,289.10  | 4,289.10  | 4,289.10  | 4,289.10  | 4,289.10  | 4,289.10  |

Source: National Defense Authorization Act 2010 – HR 2647

# Individual Augmentee Duty

## NAVY REFINING, IMPROVING TRAINING AND SUPPORT FOR IAs AND THEIR FAMILIES

Approximately 10,000 Sailors are on IA orders at any given time. Last year alone, more than 75,000 Sailors have been on IA since 2002.

The Navy is committed to supporting IA Sailors and their families with the same fervor and vigilance that deploying Sailors and their families traditionally receive. The primary command providing the supervision and coordination of training and support for IA's is the Expeditionary Combat Readiness Center (ECRC), a division of the Navy Expeditionary Combat Command (NECC).

The mission of the ECRC is to provide oversight to ensure effective processing, equipping, training, deployment, reachback, homecoming and proactive family support of combat-trained Navy IAs, ad-hoc individuals and provisional units deploying for nontraditional expeditionary missions in support of overseas contingencies.

## DECIDING TO BE AN IA

The three primary forms of IAs today are GSA Sailors, IA manpower management (IAMM) Sailors and mobilized Reserve Sailors. Sixty percent of war-on-terror assignments are made via the IA/GSA process, while the IAMM assignment process remains agile enough to meet the dynamic demands of the combatant commanders.

## CAREER BENEFITS OF VOLUNTEERING FOR IA DUTY

IA tours are career enhancing in the areas of advancement and recognition. Some of the incentives are follow-on detailing guarantee and increased IA advancement rates.

To learn more, go to [www.ia.navy.mil/faq.htm](http://www.ia.navy.mil/faq.htm).

## WHAT YOU SHOULD KNOW ABOUT GSA/IA ORDERS

There are two sets of orders cut for Sailors that negotiate for GSA orders. Sailors will get the first set shortly after negotiating with the detailer. The first set, permanent change of station, will have details for detachment from the current command and report to an NMPS location. The second set of orders (TEMADD) outlines requirements, point-of-contact information, training site locations and additional guidance. The first set of orders directs the Sailor to log onto BUPERS ONLINE at <https://www.bol.navy.mil/> select the NMCMPs link and Click "View My Orders." TEMADD orders will be released soon after the PCS orders. Sailors who have not seen their TEMADD orders 60 days prior to PCS transfer are directed to contact their commands IA coordinator and their detailers immediately.

## Training

All IA Sailors are required to complete online training courses listed in the ECRC

IA checklist and located on e-learning under the individual augmentee prerequisite training tab. The online courses prepare Sailors for Navy Individual Augmentee Combat Training (NIACT), a three-week training that provide Navy IAs with the basics for their boot-on-the-ground tour.

## Requirements

The ECRC IA checklist includes medical screenings, government travel credit card and security clearance items. The official updated version of the ECRC IA checklist can only be found at [www.ia.navy.mil/screencheck.htm](http://www.ia.navy.mil/screencheck.htm).

## RTN Or Noble Eagle (NE) Number

Your requirement tracking number (RTN) or Noble Eagle (NE) number is located on your orders. An NE number, simply stated, is a tracking number applied to a specific mission. Please be sure to give your NE number to your family before you deploy to expedite locating you in case of any emergency situation.

## IA Opportunities

GWOT support assignments (IA billets) can be viewed by logging into your Career Management System-Individual Detailing, <http://www.npc.navy.mil/Enlisted/CMS/>. Reserve Component Sailors can sign-up to receive automated e-mails for mobilization opportunities: <https://listserv.navyreserve.navy.mil>.

## Family Support

To guarantee that families receive the very best support possible, IA Sailors are directed to include family information for the person they wish the Navy to contact during their deployment in Block 5 of the ECRC IA Checklist. If a family changes location during the deployment or if they need help or have general questions, they can contact the ECRC IA Family help desk at [ecrc.fs.fct@navy.mil](mailto:ecrc.fs.fct@navy.mil). For emergencies and for those families without e-mail access, ECRC operates a 24-hour toll-free family hotline at 1-877-364-4302.

## Join the Conversation

Fleet Forces Command, the executive agent for IA continuum, has grown a robust Web and social media presence for Sailors and families to find and exchange information on their IA experience. Join the conversation at [www.facebook.com/navyIA](http://www.facebook.com/navyIA) and [http://twitter.com/Navy\\_IA](http://twitter.com/Navy_IA).

(Source: U.S. Fleet Forces Command, Navy Expeditionary Combat Command and Expeditionary Combat Readiness Center.)

HM3 Eric Nobriga, assigned to Combined Anti-Armor Team 2, hands candy to Afghan children during a patrol in Nawa District, Helmand Province, Afghanistan.





Photo by Marine Corps Lance Cpl. James Purschwitz



# Expeditionary Warfare

## **COMMANDER NAVY EXPEDITIONARY COMBAT COMMAND (NECC), NORFOLK**

NECC serves as the single functional command for the Navy's expeditionary forces and as central management for the readiness, resources, manning, training and equipping of those forces.

NECC is a command element and force provider for integrated maritime expeditionary missions. NECC is a core expeditionary force providing effective waterborne and ashore anti-terrorism, force protection, theater security cooperation and engagement, and humanitarian assistance/disaster relief contingency response. Upon request, NECC supplements Coast Guard homeland security requirements while training and equipping forces to support joint mission requirements.

## **MARITIME EXPEDITIONARY SECURITY FORCE (MESF)**

MESF provides inshore and coastal surveillance, security and antiterrorism for aircraft, airfields, campsites, convoys and convoy routes, ports, harbors, anchorages, approaches, roadsteads and other inshore or coastal areas of importance.

Additionally, MESF embarks security teams on board Navy and merchant vessels to provide in-transit security protection. Maritime Expeditionary

Security Squadrons are deployable worldwide and operate sophisticated surveillance and communications equipment supporting landward, seaward and embarked security forces.

Together, these forces provide security to vital shipping, forces and infrastructure in the littoral regions.

## **Maritime Expeditionary Security Group 1, San Diego**

- Maritime Expeditionary Security Squadron (MSRON) 1, San Diego
- MSRON 3, San Diego
- MSRON 5, San Diego
- MSRON 7, Guam
- MSRON 9, Everett, Wash.

## **Maritime Expeditionary Security Group 2, Portsmouth, Va**

- MSRON 2, Portsmouth, Va.
- MSRON 4, Portsmouth, Va.
- MSRON 6, Portsmouth, Va.
- MSRON 8, Newport, R.I.
- MSRON 10, Jacksonville, Fla.

## **EXPLOSIVE ORDNANCE DISPOSAL (EOD)**

EOD conducts counter IED operations, renders safe explosive hazards and disarms underwater explosives such as mines. EOD technicians can handle chemical, biological and radiological threats, and are the only military EOD force that can

both parachute from the air to reach distant targets or dive under the sea to disarm weapons. Mobile diving and salvage units clear harbors of navigation hazards, engage in underwater search and recovery operations, and perform limited underwater repairs on ships.

## **Commander, EOD Group 1, San Diego**

- EOD Mobile Unit (EODMU) 1, San Diego
- EODMU 3, San Diego
- EODMU 5, Guam
- EODMU 11, Whidbey Island, Wash.
- Mobile Diving and Salvage Unit (MDSU) 1, Pearl Harbor
- EOD Training and Evaluation Unit (EODTEU) 1, San Diego
- EOD Expeditionary Support Unit (EODESU) 1, San Diego

## **Commander EOD Group 2, Norfolk**

- EODMU 2, Norfolk
- EODMU 6, Norfolk
- EODMU 8, Sigonella, Italy
- EODMU 12, Norfolk
- EOD ESU 2, Norfolk
- EODTEU 2, Virginia Beach, Va.
- MDSU 2, Norfolk
- EOD Operational Support Unit 10, Virginia Beach, Va.

## **NAVY EXPEDITIONARY LOGISTICS SUPPORT GROUP (NAVELSG), WILLIAMSBURG, VA.**

NAVELSG delivers worldwide expeditionary logistics with active and Reserve Component personnel to conduct port and air cargo handling missions, customs inspections, contingency contracting capabilities, fuels distribution, freight terminal and warehouse operations, postal services, and ordnance reporting and handling.

As part of NECC, NAVELSG deploys tailored force packages providing expeditionary logistics to combatant commanders and component commanders, and provides support to all NECC deployed commands, detachments and teams. NAVELSG provides multi-function logistics detachments with organic command and control to support both CONUS and OCONUS NECC operations.

## **1st Expeditionary Logistics Regiment (NAVELR)**

- Navy Cargo Handling Battalion (NCHB) 1, Williamsburg, Va.





ND2 Zachery Dojaquez and an Iraqi Navy diver work together to run lifting wires from a crane to a sunken barge during dive operations in Umm Qasar, Iraq.

### 2nd NAVELR

- NCHB 4, Charleston, S.C.
- NCHB 10, Yorktown, Va.

### 3rd NAVELR

- NCHB 7, Great Lakes, Ill.
- NCHB 8, Fort Dix, N.J.

### 4th NAVELR

- NCHB 11, Jacksonville, Fla.
- NCHB 12, Bessemer, Ala.
- NCHB 13, Gulfport, Miss.

### 5th NAVELR

- NCHB 3, Alameda, Calif.

- NCHB 5, Tacoma, Wash.

- NCHB 14, Port Hueneme, Calif.

### NAVELSG Training and Evaluation Unit, Williamsburg, Va.

### NAVELSG Expeditionary Support Unit, Williamsburg, Va.

### NAVAL CONSTRUCTION FORCE

The Naval Construction Force (Seabees) provides a wide range of construction in support of operating forces, including roads, bridges, bunkers,

airfields and logistics bases. It provides responsive support to disaster recovery operations; performs civic action projects as part of the Navy's theater security cooperation program; and provides force protection for personnel and construction projects. "We Build, We Fight."

### 1st Naval Construction Division, Norfolk

### 1st Naval Construction Division Forward, Pearl Harbor

### NAVAL CONSTRUCTION REGIMENTS

#### 1st Naval Construction Regiment, Port Hueneme, Calif.

- Naval Mobile Construction Battalion (NMCB) 17, Colorado Springs, Colo.
- NMCB 18, Seattle
- Naval Construction Force Support Unit 2, Port Hueneme, Calif.

#### 3rd Naval Construction Regiment, Atlanta

- NMCB 14, Jacksonville, Fla.
- NMCB 23, Ft. Belvoir, Va.
- NMCB 24, Huntsville, Ala.

# Expeditionary Warfare

## 7th Naval Construction Regiment, Newport, R.I.

- NMCB 21, Lakehurst, NJ
- NMCB 26, Mt. Clemens, Minn.
- NMCB 27, Brunswick, Maine

## 9th Naval Construction Regiment, Fort Worth, Texas

- NMCB 15, Kansas City, Mo.
- NMCB 22, Fort Worth, Texas
- NMCB 25, Fort McCoy, Wis.
- NMCB 28, Shreveport, La.

## 22nd Naval Construction Regiment, Gulfport, Miss.

- NMCB 1, Gulfport, Miss.
- NMCB 11, Gulfport, Miss.
- NMCB 74, Gulfport, Miss.

## 25th Naval Construction Regiment, Gulfport, Miss.

- NMCB 7, Gulfport, Miss.
- NMCB 133, Gulfport, Miss.
- Underwater Construction Team (UCT) 1, Norfolk
- Construction Battalion Maintenance Unit 202, Norfolk

## 30th Naval Construction Regiment, Port Hueneme, Calif.

- NMCB 3, Port Hueneme, Calif.
- NMCB 4, Port Hueneme, Calif.
- NMCB 5, Port Hueneme, Calif.
- NMCB 40, Port Hueneme, Calif.
- Construction Battalion Maintenance

Unit 303, San Diego

- UCT 2, Port Hueneme, Calif.

## Seabee Readiness Groups

- 20th Seabee Readiness Group, Gulfport, Miss.
- 31st Seabee Readiness Group, Port Hueneme, Calif.

## RIVERINE FORCE

The riverine force establishes and maintains control of rivers and waterways for military and civil purposes, denies terrorists the use of the maritime environment, and destroys waterborne hostile forces as necessary. The riverine force combats sea-based terrorism and other illegal activities, such as hijacking, piracy and human trafficking.

## Riverine Group 1, Norfolk

- Riverine Squadron (RIVRON) 1, Norfolk
- RIVRON 2, Norfolk
- RIVRON 3, Yorktown, Va.

## MARITIME CIVIL AFFAIRS AND SECURITY TRAINING (MCAST) COMMAND, NORFOLK

Maritime Civil Affairs and Security Training Command (MCAST Command) provides Maritime Civil Affairs (MCA) and Security Force Assistance (SFA) core competencies

to enhance international partnerships. These capabilities enable a partner nation to establish and exercise its maritime security and regional stability.

Maritime Civil Affairs Teams (MCATs), deploy globally and engage on the front lines of American diplomacy. MCATs are comprised of Sailors with language expertise and cultural skills, which enable them to identify the critical needs of local citizens in the most vulnerable regions of the world.

Maritime Civil Affairs regionally aligned planners, teams and specialists liaison between the operational commander, U.S. country team, host nation civil and military entities and other key partners to facilitate the collaboration of diplomacy, defense, and development.

SFA Mobile Training Teams (MTTs) support Combatant and Navy Component Commanders' Security Cooperation efforts by delivering customized training to designated host nations. SFA MTTs provide training in foreign locations and give local nationals the capability to govern and protect themselves and their areas of responsibility from enemies. The training targets the global audience of foreign country military, civil and security personnel.

- MCASTC Det., Norfolk

## EXPEDITIONARY COMBAT READINESS CENTER (ECRC) NORFOLK

ECRC coordinates with the U.S. Army across 14 states to oversee all administrative processing, equipping, training, deployment and re-deployment of Sailors assigned as individual augmentees, in-lieu of forces and to provisional units committed to joint and maritime security operations.

- ECRC Det. Kuwait
- ECRC Det. Iraq
- ECRC Det. Afghanistan

## NAVY EXPEDITIONARY INTELLIGENCE COMMAND (NEIC), VIRGINIA BEACH, VA.

NEIC capabilities provide timely, relevant force protection indications, warnings and tactical intelligence, which enables combatant commanders to conduct missions across the spectrum of expeditionary operations; including major combat operations, maritime security operations, combat engineering/construction, theater security cooperation support, security assistance, foreign military training, maritime civil affairs and riverine operations.

*(Source: Navy Expeditionary Combat Command)*



# Special Warfare

## **COMMANDER NAVAL SPECIAL WARFARE COMMAND, CORONADO, CALIF.**

### **Naval Special Warfare Recruiting Directorate, Coronado, Calif.**

- Navy Parachute Team "Leap Frogs," Coronado, Calif.

### **Commander, Naval Special Warfare Group (NSWG) 1, Coronado, Calif.**

- SEAL Teams 1/3/5/7
- Logistics Support Unit (LSU) 1, Coronado, Calif.
- Support Activity 1, Coronado, Calif.
- Naval Special Warfare Unit 1, Guam
- Naval Special Warfare Unit 3, Bahrain

### **Commander, NSWG 2, Little Creek, Va.**

- SEAL Teams 2/4/8/10
- LSU 2, Little Creek, Va.
- Support Activity 2, Little Creek, Va.
- Naval Special Warfare Unit 2, Germany

### **Commander, NSWG 3, Coronado, Calif.**

- SEAL Delivery Vehicle Team 1, Pearl City, Hawaii

### **Commander, NSWG 4, Little Creek, Va.**

- Special Boat Team (SBT) 12, Coronado, Calif.
- SBT 20, Little Creek, Va.
- SBT 22, Stennis, Miss.
- Naval Small Craft Instruction and Technical Training School, Stennis, Miss.

### **Naval Special Warfare Center (NSWC), Coronado, Calif.**

- Naval Special Warfare Basic Training Command, Coronado, Calif.
- Naval Special Warfare Advanced Training Command, Coronado, Calif.

### **Commander, NSWG 11**

- SEAL Team 17, Coronado, Calif.
- SEAL Team 18, Little Creek, Va.

### **Commander, Naval Special Warfare Development Group, Dam Neck, Va.**

*(Source: Naval Special Warfare Command)*

A third phase student in Basic Underwater Demolitions/SEAL training is illuminated by a flare during a night shoot on San Clemente Island, Calif.

Photo by MC3 Blake Midnight



# Enlisted Ratings



**AB**

Aviation Boatswain's Mate  
ABE - Equipment  
ABF - Fuel  
ABH - Handling



**AC**

Air-Traffic Controller



**AD**

Aviation Machinist's Mate



**AE**

Aviation Electrician's Mate



**AG**

Aerographer's Mate



**AM**

Aviation Structural Mechanic  
AME - Equipment



**AO**

Aviation Ordnanceman



**AS**

Aviation Support Equipment Technician



**AT**

Aviation Electronics Technician



**AW**

Naval Air Crewmen



**AZ**

Aviation Maintenance Administrationman



**BM**

Boatswain's Mate



**BU**

Builder



**CE**

Construction Electrician



**CM**

Construction Mechanic



**CS**

Culinary Specialist



**CT**

Cryptologic Technician  
CTI - Interpretive  
CTM - Maintenance  
CTN - Networks  
CTR - Collection  
CTT - Technical



**DC**

Damage Controlman



**EA**

Engineering Aide



**EM**

Electrician's Mate



**EN**

Engineman



**EO**

Equipment Operator



**EOD**

Explosive Ordnance z Disposal



**ET**

Electronics Technician



**FC**

Fire Controlman



**FT**

Fire Control Technician



**GM**

Gunner's Mate



**GS**

Gas Turbine System Technician  
GSE - Electrical  
GSM - Mechanical



**HC**

Hospital Corpsman



**HT**

Hull Maintenance Technician



**IC**

Interior Communications Electrician



**IS**

Intelligence Specialist



**IT**

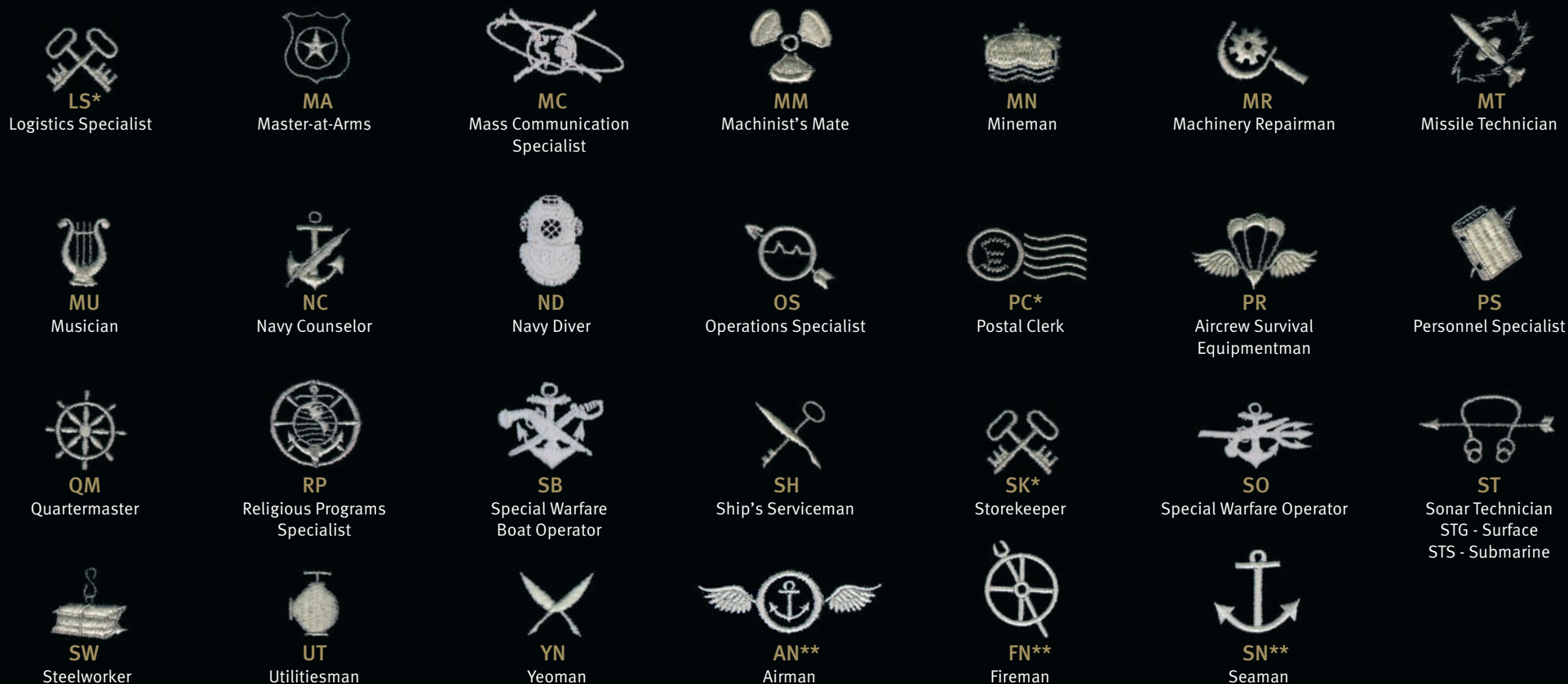
Information Systems Technician



**LN**

Legalman





**E**nlisted Sailors wear their job specialty in plain sight. Rating badges, worn on the left sleeve, consist of an eagle (called a crow); chevrons indicating the wearer's rate; and a specialty mark indicating rating. While some of these ratings have historical significance (such as the boatswain's mate), others show the evolution of Naval technology in modern times, such as the (gas turbine system technician).

*(Source: Navy Personnel Command)*

\* The LS rating was created Oct. 1, 2009, by merging the Postal Clerk (PC) and Storekeeper (SK) ratings. PC and SK Navy Reservists (E-1 to E-5) will convert to the LS rating April 1, 2010. All PC personnel are required to wear the SK rating badge no later than Oct. 1, 2011.

**\*\*General Apprenticeship**

# Warfare Pins



Astronaut



Naval Astronaut (NFO)



Naval Aviator



Naval Aviation  
Maintenance



Naval Aviation  
Observer and Flight  
Meteorologist



Flight Surgeon



Flight Nurse



Naval Flight Officer  
(NFO)



Aviation Experimental  
Psychologist and Avia-  
tion Physiologist



Enlisted Aviation  
Warfare Specialist



Naval Aviation  
Supply Corps



Aircrew



Marine Combat  
Aircrew



Special Warfare  
(SEAL)



Special Operations



Special Warfare  
Combatant-Craft  
Crewman



Surface Warfare  
Officer



Enlisted  
Surface Warfare  
Specialist



Surface Warfare  
Nurse Corps



Surface Warfare  
Medical Corps



Surface Warfare  
Dental Corps



Surface Warfare  
Medical Service  
Corps



Surface Supply  
Corps



Submarine (officer)



Submarine (enlisted)



Submarine Medical



Submarine  
Engineering Duty



Submarine  
Supply Corps



Submarine  
Combat Patrol



SSBN Deterrent Patrol



SSBN Deterrent Patrol  
(20 patrols)



Seabee Combat  
Warfare Specialist  
(officer)



Seabee Combat  
Warfare Specialist  
(enlisted)



Naval Parachutist



Basic Parachutist



Naval Reserve  
Merchant Marine



Enlisted  
Expeditionary  
Warfare Specialist



Integrated Undersea  
Surveillance System  
(officer)



Integrated Undersea  
Surveillance System  
(enlisted)



Master Explosive  
Ordnance Disposal  
Warfare Specialist



Explosive Ordnance  
Disposal Warfare  
Specialist



Basic Explosive Ordnance  
Disposal  
Warfare Breast Insignia



Fleet Marine  
Force Officer



Fleet Marine Force (FMF)  
Enlisted Warfare Spe-  
cialist



Diving  
(officer)



Diving  
Medical  
Officer



Master Diver



Diver  
(medical  
technician)



First Class  
Diver



Second Class  
Diver



Scuba  
Diver



Deep  
Submergence  
(enlisted)



Deep Submergence  
(officer)



Presidential Service  
Badge



Vice Presidential Ser-  
vice Badge



Office of the Secretary  
of Defense



Joint Chiefs  
of Staff



Recruiting Command for  
Excellence



Recruiter



Career Counselor



Division Commander for  
Excellence



Division Commander



Command-at-Sea



Command Ashore/  
Project Manager



Small Craft  
(officer)



Small Craft  
(enlisted)



Craftmaster



Master Chief Petty  
Officer of the Navy



Fleet Master  
Chief Petty Officer



Force Master  
Chief Petty Officer



Command  
Master Chief  
Petty Officer



U.S. Navy Police  
(officer)



U.S. Navy Police  
(enlisted)



U.S. Navy Security



U.S. Navy Corrections



U.S. Navy Guard



U.S. Navy  
Master-at-Arms





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information & images



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All Hands Radio, Navy News Service, All Hands Update & Navy.mil



# Devices



## GOLD STAR

Denotes subsequent awards of the same Navy decoration



## SILVER STAR

Worn in lieu of five gold stars



## BRONZE STAR

Represents participation in campaigns or operations, multiple qualification or an additional award to any of the various ribbons on which it is authorized. Also worn to denote first award of the single-mission Air Medal after Nov. 22, 1989.



## SILVER SERVICE STAR

Worn in lieu of five bronze stars



## BRONZE OAK LEAF CLUSTER

Represents second and subsequent entitlements of awards



## SILVER OAK LEAF CLUSTER

Worn for the 6th, 11th, or in lieu of five bronze oak leaf clusters



## WINTERED OVER

For wintering over on Antarctica continent – a clasp for Antarctica Service Medal; a suspension ribbon and a disc for the service ribbon; bronze for the first winter; gold for the second winter; and silver for the third



## "V" DEVICE

Authorized for acts or service involving direct participation in combat operations



## HOURLASS

Issued for each succeeding award of the Armed Forces Reserve Medal



## EUROPE AND ASIA CLASPS

Worn on the suspension ribbon of the Navy Occupation Service Medal



## FLEET MARINE FORCE COMBAT OPERATIONS INSIGNIA

For Navy personnel attached to Fleet Marine Force units participating in combat operations



SILVER "E"  
Denotes Expert Marksman qualification



## BATTLE "E" DEVICE



## BRONZE "S"

Denotes Sharpshooter Marksman qualification



## "M" DEVICE

Denotes Naval Reserve mobilization in support of certain operations



## STRIKE/FLIGHT DEVICE

Bronze Arabic numeral denotes the total number of strike/flight awards of the Air Medal earned subsequent to April 9, 1962



## "3/16" PALM

Worn on the Republic of Vietnam Gallantry Cross Unit Citation and Republic of Vietnam Civil Actions Unit Citation ribbons



"E" DEVICE  
Denotes four or more Battle "E" Awards



KUWAIT LIBERATION CLUSTER




REPUBLIC OF VIETNAM CAMPAIGN CLASP

# U.S. Armed Forces Ranks

Air Force • Army • Marines  
Officer Ranks

Navy • Coast Guard  
Officer Ranks

0-10



General of the Air Force / Army (Reserved for Wartime)



Fleet Admiral (Reserved for Wartime)



Admiral / Commandant of the Coast Guard



General

0-9



Lieutenant General



Vice Admiral

0-8



Major General



Rear Admiral

0-7




Brigadier General




Rear Admiral (Lower Half)

0-6



Colonel



Captain

0-5




Lieutenant Colonel




Commander

0-4



Major



Lieutenant Commander

0-3




Captain




Lieutenant

0-2



First Lieutenant



Lieutenant Junior Grade

0-1



Second Lieutenant



Ensign

Air Force


Army

Marine Corps


Navy & Coast Guard

Warrant Officers


No Warrant




Warrant Officer 1




Chief Warrant Officer 2



Chief Warrant Officer 3




Chief Warrant Officer 4




Chief Warrant Officer 5


Warrant Officer 1 (Coast Guard only)




Chief Warrant Officer 2



Chief Warrant Officer 3

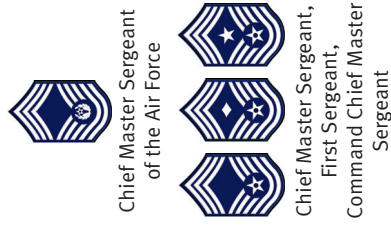


Chief Warrant Officer 4



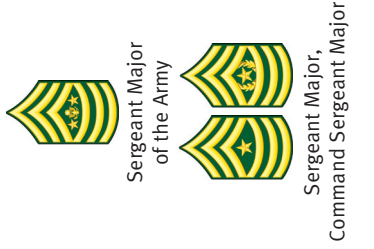
Chief Warrant Officer 5

## Air Force

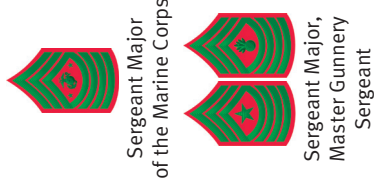


E-9

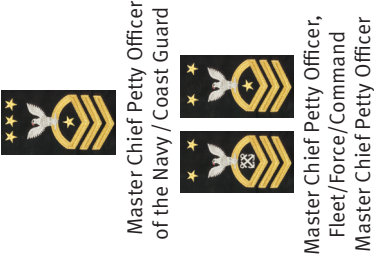
## Army



## Marine Corps



## Navy & Coast Guard



E-8



E-7



E-6



E-5



E-4



Airman First Class



Airman



Private



Private First Class



Seaman Apprentice

Airman Basic

Private

Private

Seaman Recruit



















































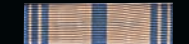


















Poster courtesy of All Hands Magazine  
www.navy.mil





# Order of Precedence

|   |   |   |  |   |   |   |   |
|---|---|---|--|---|---|---|---|
|    |    |    |    |    |    |    |    |
| Medal of Honor  | Navy Cross  | Defense Distinguished Service Medal   | Distinguished Service Medal  | Silver Star   | Defense Superior Service Medal  | Legion of Merit   | Distinguished Flying Cross  |
|    |    |    |    |    |    |    |    |
| Navy/Marine Corps Medal   | Bronze Star   | Purple Heart  | Defense Meritorious Service Medal  | Meritorious Service Medal   | Air Medal   | Joint Service Commendation Medal  | Navy/Marine Corps Commendation Medal  |
|    |    |    |    |    |    |    |    |
| Joint Service Achievement Medal   | Navy/Marine Corps Achievement Medal   | Combat Action Ribbon  | Presidential Unit Citation   | Joint Meritorious Unit Award  | Navy Unit Commendation  | Meritorious Unit Commendation   | Navy "E" Ribbon   |
|    |    |    |    |    |    |    |    |
| POW Medal   | Good Conduct Medal  | Navy Reserve Meritorious Service Medal  | Navy Fleet Marine Force Ribbon   | Navy Expeditionary Medal  | National Defense Service Medal  | Korean Service Medal  | Antarctica Service Medal  |
|    |    |    |    |    |    |    |    |
| Armed Forces Expeditionary Medal  | Vietnam Service Medal   | Southwest Asia Service Medal  | Kosovo Campaign Medal  | Afghanistan Campaign Medal  | Iraq Campaign Medal   | Global War on Terrorism Expeditionary Medal   | Global War on Terrorism Service Medal   |
|  |  |  |  |  |  |  |  |
| Korea Defense Service Medal   | Armed Forces Service Medal  | Humanitarian Service Medal  | Military Outstanding Volunteer   | Sea Service Deployment Ribbon   | Navy Arctic Service Ribbon  | Navy Reserve Sea Service Ribbon   | Navy/Marine Corps Overseas Service Ribbon   |
|  |  |  |  |  |  |  |  |
| Navy Recruiting Service Ribbon  | Navy Recruit Training Service Medal   | Armed Forces Reserve Medal  | Navy Reserve Medal   | Philippine Presidential Unit Citation   | Republic of Korea Presidential Unit Citation  | Republic of Vietnam Presidential Unit Citation  | Republic of Vietnam Gallantry Cross Unit Citation                                     |
|  |  |  |  |  |  |  |  |
| Republic of Vietnam Civil Actions Unit Citation                                     | United Nations Service Medal  | United Nations Medal  | NATO Medals  | Multinational Force and Observers Medal   | Inter American Defense Board Medal  | Republic of Vietnam Campaign Medal  | Kuwait Liberation Medal (Kingdom of Saudi Arabia)                                     |
|   |   |   |  |   |  |  |  |
|   |   |   |  |   | Kuwait Liberation (Kuwait) Medal  | Rifle Marksmanship Medal  | Pistol Marksmanship Medal   |

# Working Uniforms



## Rank Insignia:

The appropriate embroidered rate/rank insignia will be worn on the front of the NWU cap and on each collar by all Sailors E-4 to O-10.

## Sleeve Rolling:

- 3-inch wide band covered with fabric side out and cuff clearly visible
- 2 inches above elbow

## Sleeve Length:

- When shirt cuff is fastened length of sleeve should cover the wrist bone, but not extend further than the first knuckle at the base of the thumb.

## NWU Boots:

- Boot laces must be tied and tucked into the cuff of the boots.
- Boots should be worn with boot socks.
- Smooth finish boots are authorized for shore and shipboard use.
- Rough-out boots are authorized for shore duty only.

- \* All buttons and closures shall be secured
- \* Recommend uniforms be washed inside out

Photo by MC2(AW/SW) Jhi Scott



## 8-Point Cover:

- Square on head, not resting on ears
- Visor just above eye level and parallel to deck

## T-Shirt & Mockneck Sweater:

- Collar should fit comfortably around neck.
- Mockneck sweater sleeve length shall not extend beyond the length of the NWU shirt sleeve.



## Warfare Insignia:

- Primary warfare insignia shall be sewn centered and flush with the top of U.S. Navy tape. The fabric strip shall be sewn with a 1/4 inch border on the left and right of the embroidery.

## Trouser:

- Trousers worn at waistline with belt

## Shirt Length:

- Shirt length must extend to the bottom of the crotch, but not lower than the middle of the cargo pocket flap.
- No gapping at blouse front, both sides of shirt opening must overlap

## Trouser:

- Trouser length should be long enough to touch deck when not wearing boots.

## Trouser Blousing:

- Blouse trousers using blousing straps. The blousing straps should be affixed between the 3rd and 4th eyelets from the top.

# Ships

\*Under construction or authorized for construction

\*\*Navy Reserve Force

## CRUISERS

Modern U.S. Navy guided-missile cruisers perform primarily in a battle force role. These ships are multimission, anti-air warfare (AAW), anti-submarine warfare (ASUW), long-range strike and anti-surface warfare (ASW) surface combatants capable of supporting carrier and expeditionary strike groups, amphibious forces, or of operating independently and as flagships of surface strike groups.

### ***Ticonderoga-class***

USS *Bunker Hill* (CG 52)  
USS *Mobile Bay* (CG 53)  
USS *Antietam* (CG 54)  
USS *Leyte Gulf* (CG 55)  
USS *San Jacinto* (CG 56)  
USS *Lake Champlain* (CG 57)  
USS *Philippine Sea* (CG 58)  
USS *Princeton* (CG 59)  
USS *Normandy* (CG 60)  
USS *Monterey* (CG 61)  
USS *Chancellorsville* (CG 62)  
USS *Cowpens* (CG 63)  
USS *Gettysburg* (CG 64)  
USS *Chosin* (CG 65)  
USS *Hue City* (CG 66)  
USS *Shiloh* (CG 67)  
USS *Anzio* (CG 68)  
USS *Vicksburg* (CG 69)  
USS *Lake Erie* (CG 70)  
USS *Cape St. George* (CG 71)  
USS *Vella Gulf* (CG 72)  
USS *Port Royal* (CG 73)

## DESTROYERS

Guided-missile destroyers are multimission AAW, ASW and ASUW surface combatants. They operate independently for support of carrier and expeditionary strike groups and surface strike groups.

### ***Arleigh Burke-class***

USS *Arleigh Burke* (DDG 51)  
USS *Barry* (DDG 52)  
USS *John Paul Jones* (DDG 53)  
USS *Curtis Wilbur* (DDG 54)  
USS *Stout* (DDG 55)  
USS *John S. McCain* (DDG 56)  
USS *Mitscher* (DDG 57)  
USS *Laboon* (DDG 58)  
USS *Russell* (DDG 59)  
USS *Paul Hamilton* (DDG 60)  
USS *Ramage* (DDG 61)  
USS *Fitzgerald* (DDG 62)  
USS *Stethem* (DDG 63)  
USS *Carney* (DDG 64)  
USS *Benfold* (DDG 65)  
USS *Gonzalez* (DDG 66)  
USS *Cole* (DDG 67)  
USS *The Sullivans* (DDG 68)  
USS *Milius* (DDG 69)  
USS *Hopper* (DDG 70)  
USS *Ross* (DDG 71)  
USS *Mahan* (DDG 72)  
USS *Decatur* (DDG 73)  
USS *McFaul* (DDG 74)  
USS *Donald Cook* (DDG 75)  
USS *Higgins* (DDG 76)

USS *O'Kane* (DDG 77)  
USS *Porter* (DDG 78)  
USS *Oscar Austin* (DDG 79)  
USS *Roosevelt* (DDG 80)  
USS *Winston S. Churchill* (DDG 81)  
USS *Lassen* (DDG 82)  
USS *Howard* (DDG 83)  
USS *Bulkeley* (DDG 84)  
USS *McCampbell* (DDG 85)  
USS *Shoup* (DDG 86)  
USS *Mason* (DDG 87)  
USS *Preble* (DDG 88)  
USS *Mustin* (DDG 89)  
USS *Chafee* (DDG 90)  
USS *Pinckney* (DDG 91)  
USS *Momsen* (DDG 92)  
USS *Chung-Hoon* (DDG 93)  
USS *Nitze* (DDG 94)  
USS *James E. Williams* (DDG 95)  
USS *Bainbridge* (DDG 96)  
USS *Halsey* (DDG 97)  
USS *Forrest Sherman* (DDG 98)  
USS *Farragut* (DDG 99)  
USS *Kidd* (DDG 100)  
USS *Gridley* (DDG 101)  
USS *Sampson* (DDG 102)  
USS *Truxtun* (DDG 103)  
USS *Sterett* (DDG 104)  
USS *Dewey* (DDG 105)  
USS *Stockdale* (DDG 106)  
PCU *Gravelly* (DDG 107)\*  
USS *Wayne E. Meyer* (DDG 108)  
PCU *Jason Dunham* (DDG 109)\*  
PCU *William P. Lawrence* (DDG 110)\*  
PCU *Spruance* (DDG 111)\*  
PCU *Michael Murphy* (DDG 112)\*

### ***Zumwalt-class***

USS *Zumwalt* (DDG 1000)\*  
USS *Michael Monsoor* (DDG 1001)\*

## FRIGATES

Frigates fulfill a protection-of-shipping mission as ASW combatants for amphibious expeditionary forces, underway replenishment groups and merchant convoys.

### ***Oliver Hazard Perry-class***

USS *McInerney* (FFG 8)  
USS *Boone* (FFG 28)\*\*  
USS *Stephen W. Groves* (FFG 29)\*\*  
USS *John L. Hall* (FFG 32)  
USS *Jarrett* (FFG 33)  
USS *Underwood* (FFG 36)  
USS *Crommelin* (FFG 37)\*\*  
USS *Curts* (FFG 38)\*\*  
USS *Doyle* (FFG 39)\*\*  
USS *Halyburton* (FFG 40)  
USS *McClusky* (FFG 41)\*\*  
USS *Klakring* (FFG 42)\*\*  
USS *Thach* (FFG 43)  
USS *DeWert* (FFG 45)  
USS *Rentz* (FFG 46)  
USS *Nicholas* (FFG 47)  
USS *Vandegrift* (FFG 48)  
USS *Robert G. Bradley* (FFG 49)  
USS *Taylor* (FFG 50)  
USS *Gary* (FFG 51)  
USS *Carr* (FFG 52)  
USS *Hawes* (FFG 53)  
USS *Ford* (FFG 54)





USS *Elrod* (FFG 55)  
USS *Simpson* (FFG 56)\*\*  
USS *Reuben James* (FFG 57)  
USS *Samuel B. Roberts* (FFG 58)  
USS *Kauffman* (FFG 59)  
USS *Rodney M. Davis* (FFG 60)\*\*  
USS *Ingraham* (FFG 61)

### AMPHIBIOUS ASSAULT

Operating as part of the modern U.S. Navy, amphibious assault ships project power and maintain presence by serving as the cornerstone of the expeditionary strike groups. These ships use Air Cushion Landing Craft (LCAC), conventional

landing craft and helicopters to move Marine assault forces ashore.

In a secondary role, using AV-8B Harrier aircraft and anti-submarine warfare helicopters, these ships perform sea control and limited power projection missions.

Marines from the 24th Marine Expeditionary Unit ride in Landing Craft Unit 1645 enroute to USS *Nassau* (LHA 4) during COMPTUEX off the East Coast of the United States.

Photo by MC1 Brien Aho



# Ships

## **Tarawa-class**

USS *Nassau* (LHA 4)  
USS *Peleliu* (LHA 5)

## **Wasp-class**

USS *Wasp* (LHD 1)  
USS *Essex* (LHD 2)  
USS *Kearsarge* (LHD 3)  
USS *Boxer* (LHD 4)  
USS *Bataan* (LHD 5)  
USS *Bonhomme Richard* (LHD 6)  
USS *Iwo Jima* (LHD 7)  
USS *Makin Island* (LHD 8)

## **America-class**

PCU *America* (LHA 6)\*

## **AMPHIBIOUS TRANSPORT DOCK**

Amphibious transport dock ships are used to transport and land elements of a landing force for a variety of expeditionary warfare missions. These ships are used to transport Marines, their equipment and supplies by embarked air cushion or conventional landing craft or amphibious vehicles, augmented by helicopters or vertical take off and landing aircraft in amphibious assault, special operations, or expeditionary warfare missions.

## **Austin-class**

USS *Cleveland* (LPD 7)  
USS *Dubuque* (LPD 8)  
USS *Denver* (LPD 9)  
USS *Ponce* (LPD 15)

## **San Antonio-class**

USS *San Antonio* (LPD 17)  
USS *New Orleans* (LPD 18)  
USS *Mesa Verde* (LPD 19)  
USS *Green Bay* (LPD 20)  
USS *New York* (LPD 21)  
*San Diego* (LPD 22)\*  
*Anchorage* (LPD 23)\*  
*Arlington* (LPD 24)\*  
*Somerset* (LPD 25)\*

## **AMPHIBIOUS DOCK LANDING**

Dock landing ships support amphibious operations including landings via air, LCAC, conventional landing craft and helicopters, onto hostile shores.

## **Whidbey Island-class**

USS *Whidbey Island* (LSD 41)  
USS *Germantown* (LSD 42)  
USS *Fort McHenry* (LSD 43)  
USS *Gunston Hall* (LSD 44)  
USS *Comstock* (LSD 45)  
USS *Tortuga* (LSD 46)  
USS *Rushmore* (LSD 47)  
USS *Ashland* (LSD 48)

## **Harpers Ferry-class**

USS *Harpers Ferry* (LSD 49)  
USS *Carter Hall* (LSD 50)  
USS *Oak Hill* (LSD 51)  
USS *Pearl Harbor* (LSD 52)

## **AMPHIBIOUS COMMAND**

Amphibious Command ships provide command and control for fleet

commanders. Commissioned in 1970, these are the only ships to be designed initially for an amphibious command ship role. Earlier amphibious command ships lacked sufficient speed to keep up with a 20-knot amphibious force. USS *Blue Ridge* (LCC 19) became the 7th Fleet command ship in 1979, and USS *Mount Whitney* (LCC/JCC 20) became the 6th Fleet command ship in 2005. *Mount Whitney* was transferred to Military Sealift Command, but is still in commission.

## **Blue Ridge-class**

USS *Blue Ridge* (LCC 19)  
USS *Mount Whitney* (LCC/JCC 20)

## **MINE COUNTERMEASURES SHIPS**

*Avenger*-class ships are designed as mine hunter-killers capable of finding, classifying and destroying moored and bottom mines. The last three MCM ships were purchased in 1990, bringing the total to 14 fully deployable, oceangoing *Avenger*-class ships. These ships use sonar and video systems, cable cutters and a mine detonating device that can be released and detonated by remote control. They are also capable of conventional sweeping measures.

## **Avenger-class**

USS *Avenger* (MCM 1)  
USS *Defender* (MCM 2)  
USS *Sentry* (MCM 3)  
USS *Champion* (MCM 4)

USS *Guardian* (MCM 5)  
USS *Devastator* (MCM 6)  
USS *Patriot* (MCM 7)  
USS *Scout* (MCM 8)  
USS *Pioneer* (MCM 9)  
USS *Warrior* (MCM 10)  
USS *Gladiator* (MCM 11)  
USS *Ardent* (MCM 12)  
USS *Dextrous* (MCM 13)  
USS *Chief* (MCM 14)

## **COASTAL PATROL SHIPS**

The primary mission of these ships is coastal patrol and interdiction surveillance, an important aspect of littoral operations.

These ships provide the U.S. Navy with a fast, reliable platform that can respond to emergent requirements in a shallow water environment. Five of these ships have been forward-deployed to the Gulf Region in support of the war on terrorism.

The *Cyclone*-class have all been employed jointly with the U.S. Coast Guard to help protect the nation's coastline. The Navy and Coast Guard signed an agreement in August 2004 that allowed five ships to be under the operational command of the Coast Guard beginning in October 2004. Two of five ships returned to the Navy in 2008; the remainder will return in 2011. Beginning in 2009, the ships will undergo a sustainment program to update the ships' communication, engineering and support systems.

### **Cyclone-class**

USS *Tempest* (PC 2)  
USS *Hurricane* (PC 3)  
USS *Monsoon* (PC 4)  
USS *Typhoon* (PC 5)  
USS *Sirocco* (PC 6)  
USS *Squall* (PC 7)  
USS *Chinook* (PC 9)  
USS *Firebolt* (PC 10)  
USS *Whirlwind* (PC 11)  
USS *Thunderbolt* (PC 12)

### **LITTORAL COMBAT SHIP**

The littoral combat ship is a fast craft designed to operate in hostile near-shore environments yet capable of open-ocean operations. It is designed to defeat asymmetric “anti-access” threats such as mines, quiet diesel submarines and fast surface craft. *Freedom*-class consists of two different hullforms – a semiplaning monohull and an aluminum trimaran. Both have reconfigurable payloads for interchangeable mission packages that focus on antisubmarine, mine and surface warfare.

### **Ships**

USS *Freedom* (LCS 1)  
USS *Independence* (LCS 2)\*  
Fort Worth (LCS 3)  
Coronado (LCS 4)

### **SUBMARINE TENDERS**

Submarine tenders furnish maintenance and logistic support for nuclear-powered attack submarines and are the largest of the active auxiliaries. Their crews are made up mostly of technicians and repair personnel.

### **Emory S. Land-class**

USS *Emory S. Land* (AS 39)  
USS *Frank Cable* (AS 40)

### **OTHER SHIPS IN COMMISSION**

USS *Constitution*  
USS *Pueblo* (AGER 2)  
Self Defense Test Ship (EDDG 31)

\*Under construction or authorized for construction

\*\*Navy Reserve Force

(Source: Naval Sea Systems Command)

Pre-Commissioning Unit *New York* (LPD 21), which has 7.5 tons of steel salvaged from the World Trade Center towers forged into her bow, enters New York Harbor.

Photo by U.S. Coast Guard Petty Officer 2nd Class Annie Elis





# Military Sealift Command Ships

Military Sealift Command (MSC) operates approximately 110 noncombatant, civilian-crewed ships that replenish U.S. Navy ships, conduct specialized missions, strategically preposition combat cargo at sea around the world and move military equipment and supplies used by deployed U.S. forces. In wartime, more than 90 percent of all equipment and supplies needed by U.S. military forces is carried by sea.

MSC, headquartered in Washington, D.C., has six major subordinate commands worldwide. Military Sealift Fleet Support Command in Norfolk, crews, trains, equips and maintains MSC's government-owned, government-operated ships around the globe. In addition, five operational commands called Sealift Logistics Commands, or SEALOGs, are located in Norfolk; San Diego; Naples, Italy; Manama, Bahrain; and Singapore.

## NAVAL FLEET AUXILIARY FORCE

The ships of MSC's Naval Fleet Auxiliary Force (NFAF) are the supply lines to U.S. Navy ships at sea. These ships provide virtually everything that Navy ships need, including fuel, food, ordnance, spare parts, mail and other supplies. All NFAF ships are government-owned and crewed by civil service mariners. Some of the ships also have a small contingent of Navy personnel aboard for operations support, supply coordination and helicopter operations. When needed, some NFAF ships also carry military or civilian helicopter detachments.

### Ammunition Ships (T-AE)

USNS *Flint* (T-AE 32) <sup>(1)</sup>  
USNS *Shasta* (T-AE 33)  
USNS *Mount Baker* (T-AE 34) <sup>(1)</sup>  
USNS *Kiska* (T-AE 35)

### Combat Stores Ships (T-AFS)

USNS *San Jose* (T-AFS 7)

### Fast Combat Support Ships (T-AOE)

USNS *Supply* (T-AOE 6)  
USNS *Rainier* (T-AOE 7)  
USNS *Arctic* (T-AOE 8)  
USNS *Bridge* (T-AOE 10)

### Hospital Ships (T-AH)

USNS *Mercy* (T-AH 19)  
USNS *Comfort* (T-AH 20)

### Dry Cargo/Ammunition Ships (T-AKE)

USNS *Lewis and Clark* (T-AKE 1)  
USNS *Sacagawea* (T-AKE 2)  
USNS *Alan Shepard* (T-AKE 3)  
USNS *Richard E. Byrd* (T-AKE 4)  
USNS *Robert E. Peary* (T-AKE 5)  
USNS *Amelia Earhart* (T-AKE 6)  
USNS *Carl Brashear* (T-AKE 7)  
USNS *Wally Schirra* (T-AKE 8)  
USNS *Matthew Perry* (T-AKE 9) <sup>(2)</sup>  
USNS *Charles Drew* (T-AKE 10) <sup>(2)</sup>  
USNS *Washington Chambers* (T-AKE 11) <sup>(2)</sup>  
USNS *William McLean* (T-AKE 12) <sup>(3)</sup>

### Fleet Replenishment Oilers (T-AO)

USNS *Henry J. Kaiser* (T-AO 187)  
USNS *John Lenthall* (T-AO 189)  
USNS *Walter S. Diehl* (T-AO 193)

USNS *John Ericsson* (T-AO 194)  
USNS *Leroy Grumman* (T-AO 195)  
USNS *Kanawha* (T-AO 196)  
USNS *Pecos* (T-AO 197)  
USNS *Big Horn* (T-AO 198)  
USNS *Tippecanoe* (T-AO 199)  
USNS *Guadalupe* (T-AO 200)  
USNS *Patuxent* (T-AO 201)  
USNS *Yukon* (T-AO 202)  
USNS *Laramie* (T-AO 203)  
USNS *Rappahannock* (T-AO 204)

### Fleet Ocean Tugs (T-ATF)

USNS *Catawba* (T-ATF 168)  
USNS *Navajo* (T-ATF 169)  
USNS *Sioux* (T-ATF 171)  
USNS *Apache* (T-ATF 172)

### Rescue and Salvage Ships (T-ARS)

USNS *Safeguard* (T-ARS 50)  
USNS *Grasp* (T-ARS 51)  
USNS *Salvor* (T-ARS 52)  
USNS *Grapple* (T-ARS 53)

## SPECIAL MISSION SHIPS

MSC's Special Mission Program provides operating platforms and services for a wide variety of U.S. military and other U.S. government missions. Services such as oceanographic and hydrographic surveys, underwater surveillance, missile tracking, command and control, and submarine support are just a few of the specialized capabilities this program provides.

### Cable Laying/Repair Ship (T-ARC)

USNS *Zeus* (T-ARC 7)

### Command Ship (LCC)

USS *Mount Whitney* (LCC/JCC 20)

### Missile Range Instrumentation Ships (T-AGM)

USNS *Observation Island* (T-AGM 23)  
USNS *Invincible* (T-AGM 24)

### Navigation Test Support Ships (T-AGS)

USNS *Waters* (T-AGS 45)

### Ocean Surveillance Ships (T-AGOS)

USNS *Victorious* (T-AGOS 19)  
USNS *Able* (T-AGOS 20)  
USNS *Effective* (T-AGOS 21)  
USNS *Loyal* (T-AGOS 22)  
USNS *Impeccable* (T-AGOS 23)

### Oceanographic Survey Ships (T-AGS)

USNS *John McDonnell* (T-AGS 51) <sup>(1)</sup>  
USNS *Pathfinder* (T-AGS 60)  
USNS *Sumner* (T-AGS 61)  
USNS *Bowditch* (T-AGS 62)  
USNS *Henson* (T-AGS 63)  
USNS *Bruce C. Heezen* (T-AGS 64)  
USNS *Mary Sears* (T-AGS 65)

(1) Expected deactivation in 2010

(2) Under construction

(3) Construction to begin in September 2010

(4) Transferring to MSC in February 2010

(5) Transferring to Pre-positioning in 2010



Sailors hook-up a pole pendant to a Military Sealift Command-contracted SA-330J Puma helicopter assigned to USNS *Amelia Earhart* (T-AKE 6) during vertical replenishment aboard USS *Tortuga* (LSD 46) during exercise *Talisman Saber* 2009.

Photo by MC1 Geronimo Aquino



# Military Sealift Command Ships

USNS *Kanawha* (T-AO 196) transits alongside USS *Fort McHenry* (LSD 43) while conducting a replenishment at sea in support of maritime security operations in the 5th Fleet Area of Responsibility.

Photo by MC2 Kristopher Wilson





## Submarine and Special Warfare Support Ships

MV C-Commando  
MV C-Champion  
MV Dolores Chouest  
MV HOS Arrowhead  
MV HOS Eagle View  
MV HOS Blackpowder  
MV HOS Westwind

## Submarine Tender (AS)

USS Emory S. Land (AS 39)  
USS Frank Cable (AS 40) (4)

## PREPOSITIONING

The MSC Pre-positioning Program supports the U.S. Army, U.S. Navy, U.S. Air Force, U.S. Marine Corps and Defense Logistics Agency. Afloat pre-positioning strategically places military equipment and supplies aboard ships located in key ocean areas to ensure rapid availability to U.S. combat troops during a conflict, a humanitarian operation or other contingency. In addition, two high-speed vessels support geographic combatant command and service requirements for intra-theater lift and theater security cooperation.

## Air Force Container Ships (T-AK)

MV CAPT Steven L. Bennett (T-AK 4296)  
MV TSGT John A. Chapman (T-AK 323)

## Army Container Ships (T-AK)

MV LTC John U.D. Page (T-AK 4496)  
MV SSGT Edward A. Carter Jr. (T-AK 4544)

## Maritime Prepositioning and Force Container Roll-on/Roll-off and Tanker (T-AK, T-AKR and T-AOT)

USNS Lawrence H Gianella (T-AOT 1125)  
USNS SGT Matej Kocak (T-AK 3005)  
SS PFC Eugene A. Obregon (T-AK 3006)  
USNS MAJ Stephen W. Pless (T-AK 3007)  
USNS 2nd LT John P. Bobo (T-AK 3008)  
USNS PFC Dewayne T. Williams (T-AK 3009)

USNS 1st LT Baldomero Lopez (T-AK 3010)  
USNS 1st LT Jack Lummus (T-AK 3011)  
USNS Sgt. William R. Button (T-AK 3012)  
USNS 1st LT Harry L. Martin (T-AK 3015)  
USNS LCPL Roy M. Wheat (T-AK 3016)  
USNS GYSGT Fred W. Stockham (T-AK 3017)  
USNS Sisler (T-AKR 311)  
USNS Dahl (T-AKR 312)

## Marine Corps Container Ship

MV MAJ Bernard F. Fisher (T-AK 4396)

## Offshore Petroleum Distribution System (T-AG)

MV VADM K.R. Wheeler (T-AG 5001)

## Aviation Logistics Support Ships (T-AVB)

SS Wright (T-AVB 3)  
SS Curtiss (T-AVB 4)

## Large, Medium-speed Roll-on/Roll-off Ships (T-AKR)

USNS Watson (T-AKR 310)  
USNS Red Cloud (T-AKR 313)  
USNS Charlton (T-AKR 314)  
USNS Watkins (T-AKR 315)  
USNS Pomeroy (T-AKR 316)  
USNS Soderman (T-AKR 317)

## High-Speed Vessel (HSV)

HSV WestPac Express (HSV 4676)  
HSV Swift (HSV 2)

## Modular Cargo Distribution System (T-AK)

SS Cape Jacob (T-AK 5029)

## SEALIFT FORCE

MSC's Sealift Program provides high-quality, efficient and cost-effective ocean transportation for DoD and other federal agencies during peacetime and war.

## Large, Medium-speed Roll-on/Roll-off Ships (T-AKR)

USNS Shughart (T-AKR 295)

USNS Gordon (T-AKR 296)  
USNS Yano (T-AKR 297)  
USNS Gilliland (T-AKR 298)  
USNS Bob Hope (T-AKR 300)  
USNS Fisher (T-AKR 301)  
USNS Seay (T-AKR 302) (5)  
USNS Mendonca (T-AKR 303)  
USNS Pililaau (T-AKR 304)  
USNS Brittin (T-AKR 305)  
USNS Benavidez (T-AKR 306)

## Transport Tankers T-AOT

USNS Paul Buck (T-AOT 1122) <sup>(1)</sup>  
USNS Samuel L. Cobb (T-AOT 1123) <sup>(1)</sup>  
USNS Richard G. Matthiesen (T-AOT 1124)  
MV Transpacific

## Dry Cargo Ships

MV American Tern (T-AK 4729)  
MV Mohegan  
MV Virginian (T-AKR 9205)  
T/B Megan Beyel

(1) Expected deactivation in 2010

(2) Under construction

(3) Construction expected to begin in September 2010

(4) Transferring to MSC in February 2010

(5) Transferring to Pre-positioning in 2010

(Source: Military Sealift Command)

# Submarines

## Attack submarines

Attack submarines are designed to seek and destroy enemy submarines and surface ships; project power ashore with *Tomahawk* cruise missiles and special operation forces (SOF); carry out intelligence, surveillance and reconnaissance (ISR) missions; conduct irregular warfare (IW) missions; and engage in mine warfare.

There are three classes of attack submarines (SSN). The *Los Angeles*-class is the backbone of the submarine force with 45 subs now in commission.

The *Seawolf*-class submarine is a multimission vessel designed to be exceptionally quiet, fast and well-armed, with advanced sensors. The *Virginia*-class is the Navy's next generation SSN and is built to excel in a wide variety of missions including anti-submarine and surface ship warfare; special operations forces; strike; ISR; IW; and mine warfare.

### Los Angeles-class

USS *Los Angeles* (SSN 688)  
USS *Philadelphia* (SSN 690)  
USS *Memphis* (SSN 691)  
USS *Bremerton* (SSN 698)  
USS *Jacksonville* (SSN 699)  
USS *Dallas* (SSN 700)  
USS *La Jolla* (SSN 701)  
USS *City of Corpus Christi* (SSN 705)  
USS *Albuquerque* (SSN 706)  
USS *San Francisco* (SSN 711)  
USS *Houston* (SSN 713)  
USS *Norfolk* (SSN 714)  
USS *Buffalo* (SSN 715)  
USS *Olympia* (SSN 717)

USS *Providence* (SSN 719)  
USS *Pittsburgh* (SSN 720)  
USS *Chicago* (SSN 721)  
USS *Key West* (SSN 722)  
USS *Oklahoma City* (SSN 723)  
USS *Louisville* (SSN 724)  
USS *Helena* (SSN 725)  
USS *Newport News* (SSN 750)  
USS *San Juan* (SSN 751)  
USS *Pasadena* (SSN 752)  
USS *Albany* (SSN 753)  
USS *Topeka* (SSN 754)  
USS *Miami* (SSN 755)  
USS *Scranton* (SSN 756)  
USS *Alexandria* (SSN 757)  
USS *Asheville* (SSN 758)  
USS *Jefferson City* (SSN 759)  
USS *Annapolis* (SSN 760)  
USS *Springfield* (SSN 761)  
USS *Columbus* (SSN 762)  
USS *Santa Fe* (SSN 763)  
USS *Boise* (SSN 764)  
USS *Montpelier* (SSN 765)  
USS *Charlotte* (SSN 766)  
USS *Hampton* (SSN 767)  
USS *Hartford* (SSN 768)  
USS *Toledo* (SSN 769)  
USS *Tucson* (SSN 770)  
USS *Columbia* (SSN 771)  
USS *Greenville* (SSN 772)  
USS *Cheyenne* (SSN 773)

### Seawolf - Class

USS *Seawolf* (SSN 21)  
USS *Connecticut* (SSN 22)  
USS *Jimmy Carter* (SSN 23)

### Virginia-class

USS *Virginia* (SSN 774)

USS *Texas* (SSN 775)  
USS *Hawaii* (SSN 776)  
USS *North Carolina* (SSN 777)  
USS *New Hampshire* (SSN 778)  
USS *New Mexico* (SSN 779)  
PCU *Missouri* (SSN 780)\*  
PCU *California* (SSN 781)\*  
*Mississippi* (SSN 782)\*  
*Minnesota* (SSN 783)\*  
*North Dakota* (SSN 784)\*  
*John Warner* (SSN 785)\*

## BALLISTIC MISSILE SUBMARINES

Strategic deterrence has been the sole mission of the fleet ballistic missile submarine (SSBN) since its inception in 1959. The SSBN provides the nation's most survivable and enduring nuclear strike capability. The *Ohio*-class submarine replaced aging fleet ballistic missile submarines built in the 1960s and is far more capable. *Ohio*-class *Trident* ballistic missile submarines provide the sea-based "leg" of the nuclear deterrence triad. *Ohio*-class SSBNs have the capability to carry up to 24 *Trident II* (D5) submarine launched ballistic missiles with multiple, independently-targeted warheads.

The first four *Ohio*-class submarines have been converted to guided-missile submarines (SSGN) with an additional capability to transport and support Navy special operations forces.

### Ohio-class

USS *Henry M. Jackson* (SSBN 730)  
USS *Alabama* (SSBN 731)  
USS *Alaska* (SSBN 732)  
USS *Nevada* (SSBN 733)

USS *Tennessee* (SSBN 734)  
USS *Pennsylvania* (SSBN 735)  
USS *West Virginia* (SSBN 736)  
USS *Kentucky* (SSBN 737)  
USS *Maryland* (SSBN 738)  
USS *Nebraska* (SSBN 739)  
USS *Rhode Island* (SSBN 740)  
USS *Maine* (SSBN 741)  
USS *Wyoming* (SSBN 742)  
USS *Louisiana* (SSBN 743)

## GUIDED MISSILE SUBMARINES

The 1994 Nuclear Posture Review determined that the United States needed only 14 SSBNs to meet the nation's strategic force needs. The decision was made to transform four *Ohio*-class submarines into conventional land attack and SOF platforms. This allowed the Navy to leverage existing submarine technology while expanding capability to meet the current and future needs of U.S. combatant commanders.

The SSGN Program Office converted four *Ohio*-class SSBNs into SSGNs in a little more than five years at a significantly lower cost than building a new platform.

USS *Ohio* (SSGN 726)  
USS *Michigan* (SSGN 727)  
USS *Florida* (SSGN 728)  
USS *Georgia* (SSGN 729)

## SUBMARINE RESCUE DIVING AND RECOMPRESSION SYSTEM

The Submarine Diving and Recompression System (SRDRS) is a rapidly deployable rescue asset that can be delivered by air or ground,



installed on pre-screened military or commercial vessels of opportunity via a ship interference template and mated to a distressed submarine within 72 hours of first notification. SRDRS' rescue module, *Falcon*, can conduct rescue operations to a depth of 2,000 feet, can mate to a disabled submarine at a list of up to 45 degrees and can transfer up to 1 personnel at a time.

### LARGE SCALE VEHICLE 2 (LSV 2)

LSV 2 *Cutthroat*, the world's largest unmanned autonomous submarine, offers the capability to conduct a wide variety of studies dramatically improving the acoustic and operational performance of future submarines. *Cutthroat*, a 205-ton, large-scale submarine test vehicle, is used to affordably explore and test emerging technologies and to conduct physics-based experiments. Specific emphasis will be on stealth, hydrodynamics, hydro-acoustics and propulsion designs to permit technology insertion into current and future submarines.

### ***Ships***

*Cutthroat* (LSV 2)

*\* Under construction or authorized for construction  
(Note: Virginia-class submarines (SSN 786 to SSN 791 have been authorized, but not named.)  
(Source: Naval Sea Systems Command)*

USS *Connecticut* (SSN 22) is underway in the Pacific Ocean while participating in *Annual Exercise 21G*, a bilateral exercise designed to enhance the capabilities of U.S. and Japanese naval forces.

Photo by MCSN Adam K. Thomas





# Aircraft Carriers

Aircraft carriers are the centerpiece of America's naval forces. On any given day, aircraft carriers exercise the Navy core capabilities of power projection, forward presence, humanitarian assistance, deterrence, sea control and maritime security. In times of crisis, the first question leaders ask is: "Where are the carriers?"

USS *Enterprise* (CVN 65) and 10 ships of the *Nimitz*-class make up the fleet of active aircraft carriers. These in-service carriers, and *Gerald R. Ford*-class (under construction) are each designed for a service life of approximately 50 years. These ships are the centerpiece of America's naval forces.

## ***Enterprise*-class**

USS *Enterprise* (CVN 65)

## ***Nimitz*-class**

USS *Nimitz* (CVN 68)

USS *Dwight D. Eisenhower* (CVN 69)

USS *Carl Vinson* (CVN 70)

USS *Theodore Roosevelt* (CVN 71)

USS *Abraham Lincoln* (CVN 72)

USS *George Washington* (CVN 73)

USS *John C. Stennis* (CVN 74)

USS *Harry S. Truman* (CVN 75)

USS *Ronald Reagan* (CVN 76)

USS *George H.W. Bush* (CVN 77)

## ***Gerald R. Ford*-class**

*Gerald R. Ford* (CVN 78)\*

\* Keel Laying, Nov. 14, 2009

(Source: Naval Air Forces)

USS *George Washington* (CVN 73) transits the Pacific Ocean while an SH-60B *Sea Hawk* helicopter assigned to Helicopter Anti-Submarine Squadron Light 51 conducts flight operations in the background.

Photo by MC3 Charles Oki



## CARRIER BASED

### EA-18G Growler

A variant of the U.S. Navy F/A-18F two-crew strike fighter, the EA-18G combines the combat-proven F/A-18F strike fighter with the proven Improved Capability III (ICAP III) AEA avionics suite.

### Squadrons

VAQ-129 Vikings  
VAQ-132 Scorpions  
VAQ-138 Yellowjackets  
VAQ-141 Shadowhawks

### F/A-18E/F Super Hornet

The F/A-18E/F provides the carrier strike group with a strike fighter that has significant growth potential and increased range, endurance and ordnance-carrying capabilities.

### SQUADRONS

VFA-2 Bounty Hunters  
VFA-11 Red Rippers  
VFA-14 Tophatters  
VFA-22 Fighting Redcocks  
VFA-27 Royal Maces  
VFA-31 Tomcatters  
VFA-32 Swordsmen  
VFA-41 Black Aces  
VFA-81 Sunliners  
VFA-102 Diamondbacks  
VFA-103 Jolly Rogers  
VFA-105 Gunslingers  
VFA-115 Eagles  
VFA-122 Flying Eagles  
VFA-131 Wildcats

VFA-136 Knighthawks  
VFA-137 Kestrels  
VFA-143 Puking Dogs  
VFA-147 Argonauts  
VFA-154 Black Knights  
VFA-211 Fighting Checkmates  
VFA-213 Black Lions

### F/A-18 Hornet

The F/A-18 is an all-weather, attack aircraft that can also be used as a fighter. In its fighter mode, the F/A-18 is used primarily as an escort and for fleet air defense. In its attack mode, it is used for force projection, interdiction and close and deep air support.

### SQUADRONS

Blue Angels  
VFA-15 Valions  
VFA-25 Fist of the Fleet  
VFA-34 Blue Blasters  
VFA-37 Bulls  
VFA-83 Rampagers  
VFA-86 Sidewinders  
VFA-87 Golden Warriors  
VFA-94 Mighty Shrikes  
VFA-97 Warhawks  
VFA-106 Gladiators  
VFA-113 Stingers  
VFA-125 Rough Raiders  
VFA-146 Blue Diamonds  
VFA-151 Vigilantes  
VFA-192 Golden Dragons  
VFA-195 Dambusters  
VFA-204 (USNR) River Rattlers  
VFC-12 (USNR) Fighting Omars

### EA-6B Prowler

The EA-6B *Prowler*, a twin-engine, mid-wing aircraft designed for carrier and advanced base operations, provides an umbrella of protection for strike aircraft, ground troops and ships by jamming communications. The primary mission of the EA-6B *Prowler* is suppression of enemy air defenses in support of strike aircraft and ground troops by interrupting enemy electronic activity and obtaining tactical electronic intelligence within the combat area.

### SQUADRONS

VAQ-130 Zappers  
VAQ-131 Lancers  
VAQ-133 Wizards  
VAQ-134 Garudas  
VAQ-135 Black Ravens  
VAQ-136 Gauntlets  
VAQ-137 Rooks  
VAQ-139 Cougars  
VAQ-140 Patriots  
VAQ-142 Gray Wolves  
VAQ-209(USNR) Star Warriors

### E-2C Hawkeye

The E-2C *Hawkeye* is the Navy's all-weather, carrier-based tactical battle management airborne early warning, command and control aircraft. The *Hawkeye* provides all-weather airborne early warning, airborne battle management and command and control functions for the carrier strike group and joint force commander.

Additional missions include surface surveillance coordination, air interdiction, offensive and defensive counter air control, close air support coordination, time critical strike coordination, search and rescue airborne coordination and communications relay.

### SQUADRONS

VAW-77(USNR) Nightwolves  
VAW-112 Golden Hawks  
VAW-113 Black Eagles  
VAW-115 Liberty Bells  
VAW-116 Sun Kings  
VAW-117 Wallbangers  
VAW-120 Greyhawks  
VAW-121 Bluetails  
VAW-123 Screwtops  
VAW-124 Bear Aces  
VAW-125 Tigertails  
VAW-126 Seahawks

### C-2A Greyhound

The C-2A provides critical logistics support to Carrier Strike Groups. Its primary mission is the transport of high-priority cargo, mail and passengers between carriers and shore bases and can deliver a combined payload of 10,000 pounds over a distance in excess of 1,000 nm. The interior arrangement of the cabin can readily accommodate cargo, passengers and litter patients. Priority cargo such as jet engines can be transported from shore to ship in a matter of hours. A cargo cage system or transport stand provides restraint for loads during launches and landings.



# Aircraft

## SQUADRONS

VRC-30 Providers  
VRC-40 Rawhides

## SHORE BASED

### E-6B *Mercury*

The E-6B *Mercury* aircraft provides a survivable communications link between national decision makers and the country's arsenal of strategic nuclear weapons. The E-6B enables the President of the United States and the Secretary of Defense to directly contact submarines, bombers and missile silos protecting our national security through deterrence.

## SQUADRONS

VQ-3 Ironman  
VQ-4 Shadows  
VQ-7 Roughnecks

### P-3C *Orion*/EP-3E *Aries II*

Originally designed as a land-based, long-range, anti-submarine warfare patrol aircraft, the P-3C's mission has evolved in the late 1990s and early 21st century to include surveillance of the battle space, either at sea or over land. Its long range and long loiter time have proved invaluable assets during Operation *Iraqi Freedom* as it can view the battlespace and instantaneously provide that information to ground troops, especially U.S. Marines.

The P-3C has advanced submarine detection sensors such as directional frequency and ranging sonobuoys and magnetic anomaly detection equipment. The P-3C can carry a mixed payload

of weapons internally and on wing pylons. The EP-3E *Aries II* (Airborne Reconnaissance Integrated Electronic System II) is the Navy's only land-based signals intelligence (SIGINT) reconnaissance aircraft. The 11 aircraft in the Navy's inventory are based on the *Orion* P-3 airframe and provide fleet and theater commanders worldwide with near real-time tactical SIGINT. With sensitive receivers and high-gain dish antennas, the EP-3E exploits a wide range of electronic emissions from deep within targeted territory.

## SQUADRONS

VP-1 Screaming Eagles  
VP-4 Skinny Dragons  
VP-5 Mad Foxes  
VP-8 Tigers  
VP-9 Golden Eagles  
VP-10 Red Lancers  
VP-16 War Eagles  
VP-26 Tridents  
VP-30 Pro's Nest  
VP-40 Fighting Marlins  
VP-45 Pelicans  
VP-46 Grey Knights  
VP-47 Golden Swordsmen  
VP-62(USNR) Broad Arrows  
VP-69(USNR) Totems  
VQ-1 World Watchers  
VQ-2 Sandeman  
VPU-1 Old Buzzards  
VPU-2 Wizards

### C-130T *Hercules*

The C-130T is the workhorse of the fleet and it's primary mission is to

satisfy Navy-specific fleet essential airlift requirements worldwide, to include flexible response to the fleet and short notice operational requirements for both training and deployed units. The C-130T operates from shore installations to provide intra-theater logistics support for all aspects of naval power. It is a four engine, turbo-prop aircraft capable of landing and taking off from short, rough dirt runways. It can transport up to 92 personnel, or 42,000 pounds of cargo, and can be configured to perform the air medical evacuation mission carrying up to 70 litters.

## SQUADRONS

VR-53 (USNR) Capital Express  
VR-54 (USNR) Revelers  
VR-55 (USNR) Minutemen  
VR-62 (USNR) Nomads  
VR-64 (USNR) Condors

### C-9B/DC-9 *Skytrain II*

The C-9B fleet is located throughout CONUS, Europe, and Asia. The Navy C-9B aircraft provides cargo and passenger transportation as well as forward deployment logistics support.

## SQUADRONS

VR-46(USNR) Eagles  
VR-52(USNR) Task Masters  
VR-56(USNR) Globe Masters  
VR-61(USNR) Islanders

### C-40A *Clipper*


The C-40A *Clipper* provides critical logistics support to the Navy. Its flight deck features a flight management computer

An F-18E *Super Hornet* assigned to the Royal Maces of Strike Fighter Squadron 2 launches off the flight deck of USS *George Washington* (CVN 73) in support of security and stability in the Western Pacific Ocean.

Photo by ATAN Josiah Connelly







system with an integrated GPS. The U.S. Navy Reserve, which operates and maintains the aircraft, is the first customer for the newest member of the Boeing Next-Generation 737 family.

The *Clipper* was ordered by the Navy to replace its fleet of aging C-9B *Skytrains*. The C-40A is the first new logistics aircraft in 19 years to join the Navy Reserve. Currently, the Navy Reserve provides 100 percent of the Navy's worldwide in-theater medium and heavy airlift.

### SQUADRONS

VR-57 (USNR) Conquistadors  
VR-58 (USNR) Sunseekers  
VR-59 (USNR) Lonestar Express

### C-12 Huron

The C-12 *Huron* is the military variant of the commercial King Air series aircraft. It is an all-metal, low-wing, T-Tail monoplane with two turbo-prop engines. The flight deck and cabin are pressurized for high altitude flight. This aircraft incorporates a cargo door with an integral air-stair door to permit easy entry and egress. With an effective payload capacity of up to 4,215 pounds, the cabin can readily be configured to accommodate passengers, cargo or both.

The mission of the C-12 *Huron* is to provide rapid, high priority movement of personnel and cargo; range clearance, courier flights, medical evacuation, and humanitarian rescue; multi-engine pilot training; and testing assets.

C-12 *Huron*'s are located at Naval Air Station (NAS) North Island, Calif.; NAS Norfolk; NAS Patuxent River, Md.; NAS Joint Reserve Base (JRB) Willow Grove, Pa.; NAS JRB New Orleans; NAS Fort Worth; NAS Jacksonville, Fla.; NAS Corpus Christi, Texas; Naval Air Facility (NAF) Andrews Air Force Base,

Washington, D.C.; MCAS Yuma, Ariz.; MCAS Miramar, Calif.; MCAS Beaufort, S.C.; MCAS New River, N.C.; MCAS Iwakuni, Japan; MCAS Futenma, Japan; NAVSTA Guantanamo Bay, Cuba; Naval Support Activity Bahrain; NAF Atsugi, Japan; NAF Kadena, Japan; and NAF Misawa, Japan.

### C-20A/D

The C-20A and D are commercial derivative *Gulfstream III* aircraft that provides world-wide airlift for senior leadership and dignitaries.

### SQUADRONS

ETD Sigonella (USNR) (C-20A)  
VR-1 (USNR) Starlifters (C-20D)

### C-20G

The C-20G is a commercial derivative *Gulfstream IV* aircraft that provides long-range, medium airlift logistics support for fleet battle groups. The C-20G is a *Gulfstream IV* variant with a cargo door providing long-range, medium lift capability.

### SQUADRONS

VR-48 (USNR) Skyliners  
VR-51 (USNR) Windjammers  
VMR Det. MCAF Kaneohe Bay, Hawaii (USMC)

### C-26

The C-26 is the military variant of the commercial Model SA-227-DC (Metro 23) aircraft series manufactured by Fairchild Aircraft Corporation. It's an all-metal, low wing, cabin-class aircraft with two Allied Signal TPE331-12 turboprop engines. With a maximum payload capacity of 5,020 pounds, the cabin can be configured to accommodate up to 19 passengers, cargo or a combination of

both. The four European-based aircraft provide rapid response cargo and passenger transportation as well as forward deployment logistics support, and the two RC-26D aircraft and one EC-26D aircraft in Hawaii support range operations at Pacific Missile Range Facility (PMRF) Barking Sands, Kauai.

NAF Sigonella  
NAF Naples  
PRMF Kauai

### C-37

The C-37A/B is a *Gulfstream 5/550* respectively, providing executive transport to Secretary of the Navy and Chief of Naval Operations, CMC, VCNO, ACMC, CFFC and DNNP.

### SQUADRONS

VR-1 ETD Pacific (USNR) Starlifters (C-37A)  
VR-1 (USNR) Starlifters (C-37B)

### F-5N/F Tiger

The F-5N is a single seat, twin-engine, tactical fighter providing air-to-air combat training for carrier air wings. The F-5F aircraft is a dual-seat version, twin-engine, tactical fighter trainer commonly used for training adversary pilots. The F-5F can also be used in the adversary mission. Both aircraft serve in an adversary-training role with simulation capability of current threat aircraft in air to air combat mode.

### SQUADRONS

VFC-13 Saints  
VFC-111 Sundowners  
VMFT-401 Snipers

## Test and Evaluation (T&E) Squadrons

T&E squadrons thoroughly test new and modified fixed-wing, rotary, and unmanned aircraft headed to the fleet. Avionics, weapons, flying qualities, software and ergonomics are just a few out of the long list of aircraft aspects that get tested. Successful completion of T&E is normally required for full-rate acquisition approval.

## SQUADRONS

VX-1  
VX-20  
VX-23 (*Growler*), Patuxent River, Md.  
VX-30  
VX-31  
HX-21

## HELICOPTERS

### SH-60F/HH-60H *Seahawk*

The *Seahawk* is a twin-engine helicopter used for anti-submarine warfare, search and rescue, drug interdiction, anti-ship warfare, cargo lift, and special operations. The Navy's SH-60B *Seahawk* is an airborne platform based aboard cruisers, destroyers, and frigates and deploys sonobuoys (sonic detectors) and torpedoes in an antisubmarine role. They also extend the range of the ship's radar capabilities. The Navy's SH-60F is carrier-based.

## SQUADRONS

HS-3 Tridents

HS-4 Black Knights  
HS-5 Nightdippers  
HS-6 Indians  
HS-7 Dusty Dogs  
HS-10 War Hawks  
HS-11 Dragonslayers  
HS-14 Chargers  
HS-15 Red Lions  
HSC-84 (USNR) Red Wolves

### SH-60B/MH-60R

The MH-60R continues the legacy of the SH-60B mission by conducting ASW and ASUW from the decks of cruisers, destroyers and frigates and also deploys as a carrier-based squadron. The MH-60R adds a dipping sonar, multi-mode ISAR radar, enhanced ESM, EO/IR, self-defense suite digital torpedos and air-to-ground weapons.

## SQUADRONS

HSL-37 Easy Riders  
HSL-40 Airwolves  
HSL-41 Seahawks (MH-60R)  
HSL-42 Proud Warriors  
HSL-43 Battle Cats  
HSL-44 Swamp Foxes  
HSL-45 Wolfpack  
HSL-46 Grandmasters  
HSL-48 Vipers  
HSL-49 Scorpions  
HSL-51 Warlords  
HSL-60 (USNR) Jaguars  
HSM-71 Raptors (MH-60R)  
HSM-77 Saberhawks (MH-60R)

### MH-60S *Knighthawk*

The MH-60S is a twin-engine helicopter used for logistics support, vertical replenishment, search and rescue, naval special warfare support and future missions to include organic airborne mine countermeasures and combat search and rescue.

## SQUADRONS

HSC-2 Fleet Angels  
HSC-3 Merlins  
HSC-8 Eightballers  
HSC-12 Golden Falcons  
HSC-21 Blackjacks  
HSC-22 Sea Knights  
HSC-23 Wild Cards  
HSC-25 Island Knights  
HSC-26 Chargers  
HSC-28 Dragon Whales  
HSC-85 High Rollers

### VH-60N *Night Hawk*

The VH-60N is a twin engine, all-weather helicopter flown by Marine Helicopter Squadron 1 and supports the executive transport mission for the President of the United States. The VH-60N is an executive transport helicopter derived from both the U.S. Army's UH-60 *Black Hawk* and the U.S. Navy's SH-60 *Seahawk* aircraft. The H-60 family of helicopters is widely used throughout DoD for anti-submarine warfare, search and rescue, drug interdiction, anti-ship warfare, cargo lift and special operations. The VH-60N was first delivered to HMX-1 in 1989 as a

replacement for the VH-1N.

## SQUADRONS

HMX-1 The Nighthawks

### MH-53E *Sea Dragon*

The MH-53E, a mine-countermeasures derivative of the CH-53E *Super Stallion*, is heavier and has a greater fuel capacity than the *Super Stallion*. Capable of transporting up to 55 troops, the MH-53E can carry a 16-ton payload 50 nautical miles, or a 10-ton payload 500 nautical miles. In its primary mission of airborne mine countermeasures, the MH-53E is capable of towing a variety of mine countermeasures systems.

## SQUADRONS

HM-14 (USNR) Vanguard  
HM-15 (USNR) Blackhawks

### UNMANNED AIRCRAFT SYSTEMS RQ-7B *Shadow* Unmanned Aerial Vehicle (UAV)

The *Shadow* is a joint UAS employed by the Marine Corps' VMU squadrons (VMU-1, VMU-2, and VMU-3) to provide MAGTF commanders with both planned and immediate air reconnaissance. Each VMU operates three systems and each system possesses four air vehicles. The RQ-7B carries electro-optical and infrared sensors to provide day and night imagery as well as a laser spotter to support targeting. It serves in the air reconnaissance function to produce intelligence, target acquisition, and battle damage assessment. It also supports the



command and control function by serving as a platform for airborne communications relay.

### **MQ-8B Navy Fire Scout**

*Fire Scout* has the ability to autonomously take-off from and land on any Ship Control Station equipped aviation-capable warship and also at unprepared landing zones close to the forward edge of the battle area (FEBA). It can carry out surveillance, find tactical targets, track and designate targets and provide accurate targeting data to strike platforms such as strike aircraft, helicopters and ships. The UAV is also able to carry out battle damage assessment.

## **TRAINERS**

### **T-6A Texan II**

The T-6A *Texan II* is a tandem-seat,

turboprop trainer whose mission is to train Navy and Marine Corps pilots and naval flight Officers. The aircraft is one component of the Joint Primary Aircraft Training System along with simulators, computer-aided academics, and a Training Integration Management System.

The joint program, that will replace Navy T-34C aircraft, uses commercial off-the-shelf subsystems to the maximum extent possible. The Navy's total T-6A requirement is 315 aircraft. The Navy aircraft and ground-based training systems will be completely supported and maintained by commercial vendors with intermediate maintenance provided for selected systems at the operating site.

## **SQUADRONS**

VT-4 Mighty Warbucks

VT-10 Wildcats

### **T-34C Turbomenter**

The T-34C is used to provide primary flight training for student pilots. As a secondary mission, approximately 10 percent of the aircraft provide pilot proficiency and other aircraft support services to Commander, Naval Air Force, U.S. Atlantic Fleet; Commander, Naval Air Force, U.S. Pacific Fleet; and Naval Air Systems Command's "satellite sites" operated throughout CONUS. The T-34C was procured as a commercial derivative aircraft certified under an FAA-Type Certificate. Throughout its life, the aircraft has been operated and commercially supported by the Navy using FAA processes, procedures and certifications.

## **SQUADRONS**

VT-2 Doer Birds

VT-3 Red Knights

VT-6 Shooters

VT-27 Boomers

VT-28 Rangers

### **T-45A/C Goshawk**

The T-45A, the Navy version of the British Aerospace *Hawk* aircraft, is used for intermediate and advanced portions of the Navy/Marine Corps pilot training program for jet carrier aviation and tactical strike missions. The T-45 includes an integrated training system that includes the aircraft, operations and instrument fighter simulators, academics and training integration system. There are two versions of T-45 aircraft currently in operational use at this time, the T-45A and T-45C derivatives. The T-45A, which became operational in 1991, contains an analog design cockpit while the new T-45C (delivery began in 1997) is built around a new digital "glass cockpit" design.

AW2 Dale Stanton, (left) and AW3 Christopher Lyons wait aboard an MH-60S *Sea Hawk* helicopter assigned to Helicopter Sea Combat Squadron 8 as it makes its approach over USNS *Pecos* (T-AO 197) during a replenishment-at-sea with USS *John C. Stennis* (CVN 74).

Photo by MC3 Kyle Steckler





# Aircraft

## SQUADRONS

VT-7 Eagles  
VT-9 Tigers  
VT-21 Redhawks  
VT-22 Golden Eagles

### **T-44A *Pegasus* and the TC-12 *Huron***

The T-44A and the TC-12 are used to train Navy and Air Force pilots to fly multi-engine, turbo-prop aircraft such as the P-3 and the C-130.

## SQUADRONS

VT-31 Wise Owls (T-44A)  
VT-35 Stingrays (TC-12)

### **T-39N/G *Sabreliner***

The T-39N *Sabreliner* is a multipurpose, low-wing, twin-jet aircraft. The 14 T-39Ns – derivatives of the commercial *Sabre* model 265-40 – are used for training undergraduate military flight officer students in radar navigation and airborne radar-intercept procedures. The eight T-39Gs – derivatives of the commercial *Sabre* model 265-60 – are used for student non-radar training.

## SQUADRONS

VT-4 Mighty Warbucks  
VT-86 Sabre Hawks

### **TH-57 *Sea Ranger***

The TH-57 *Sea Ranger* is a derivative of the commercial Bell *Jet Ranger* 206 and its primary mission is to provide advanced rotary-wing training to Navy and Marine

Corps pilots. The TH-57 has two variants – TH-57B and TH-57C models. The TH-57B is used for primary visual flight rules training and the TH-57C is used for advanced instrument flight rules training.

## SQUADRONS

HT-8 Eightballers  
HT-18 Vigilant Eagles

## SPECIAL SQUADRONS

VC-6 Firebees  
VC-8 Redtails  
VX-1 Pioneers  
VX-9 Vampires  
TACRON-11 Dirigimi  
TACRON-12 Talons  
TACRON-21 Blackjacks  
TACRON-22 Skylords

### **F-5N/F *Tiger***

The F-5N is a single seat, twin-engine, tactical fighter and attack aircraft providing simulated air-to-air combat training. The aircraft is a dual-seat version, twin-engine, tactical fighter commonly used for training and adversary combat tactics. The aircraft serves in an aggressor-training role with simulation capability of current threat aircraft in fighter combat mode.

## SQUADRONS

VFC-13 Saints  
VFC-111 Sundowners  
(Source: Naval Air Forces)

An MH-53E *Sea Dragon* helicopter assigned to Helicopter Mine Countermeasures Squadron 14 prepares to land on the flight deck of USS *Harry S. Truman* (CVN 75) during a joint task force exercise.



Photo by MCSN Donald R. White Jr.

# Weapons

## STRATEGIC STRIKE

### *Trident II (D-5)*

Larger and with longer range than *Trident I*, the *Trident II* was first tested aboard a submarine in March 1989 and deployed in 1990.

## GENERAL-PURPOSE BOMBS

The MK-80 series general-purpose bomb family was created in the late 1940s and has been the standard air-launched bomb for the services ever since. The general-purpose bomb family is designed to provide blast and fragmentation effects and is used extensively in a number of configurations including laser-guided bombs, *Joint Direct Attack Munitions* (JDAM) and air-delivered mining applications. The unguided versions of the general-purpose bomb can also be delivered in freefall or retarded modes depending upon mission requirements. There were three basic versions of these bombs in inventory for many years:

- \*2,500 pound MK 82/BLU 111
- \*1,000 pound MK 83/BLU 110
- \*2,000 pound MK 84/BLU 117

The remaining versions of the MK 80 series bombs are being converted from the MK designation to the Bomb-Live Unit (BLU) designation during new production.

The Navy's MK 80 series bombs remaining in inventory are filled with H-6 high explosive; the newer BLU series bombs incorporate a PBXN-109 explosive that provides less sensitive characteristics and is considered safer to handle and stow.

The Navy's newest member to the BLU series is the BLU-126 low-collateral (LOCO) warhead. It is identical to the BLU-111 with the exception of the amount of PBXN-109 explosive filler. The aft end of the BLU-126 bomb is packed with approximately 27 pounds of explosive filler with the remainder of the bomb being filled with inert material.

### Laser-Guided Bomb Kits (LGB)

LGBs were developed to enhance the terminal accuracy of air-launched, general-purpose bombs and entered the fleet's inventory in 1968. An LGB kit consists of a Computer Control Group (CCG) and Air Foil Group (AFG) normally attached to a general-purpose bomb to form an LGB.

The Dual Mode Laser Guided kit enhances existing LGB kits by adding GPS/INS capabilities. Like the LGB it consists of a CCG and an AFG.

### Joint Direct Attack Munition (JDAM)

JDAM kits were jointly developed with the U.S. Air Force to provide increased accuracy for air-launched bombs. The JDAM kit consists of a tail kit and mid-body strakes attached to a general purpose or penetrator bomb body -500, 1,000 and 2,000 lbs.

Guidance and control is provided by Global Positioning System-aided inertial navigation system.

### Laser Joint Direct Attack Munition (LJDAM)

LJDAM is a precision guided bomb, consisting of a modular laser sensor integrated with inventory JDAM kits to provide moving target kill capability. The laser sensor kit is field-installed on the 500-lb version of JDAM.

### Joint Stand-off Weapon (JSOW)

The JSOW is an air-launched "drop-and-forget" weapon that is capable of approximately 60 nautical mile stand-off ranges. JSOW variants provide the fleet with a strike interdiction capability against soft and hardened targets such as fixed and relocatable air defense elements, parked aircraft, command and control facilities, light combat vehicles, industrial elements, bunkers, personnel and, beginning in FY10, enemy surface ships.

Currently, two variants of JSOW are in the fleet:

AGM-154A, which uses GPS/INS guidance and general purpose submunitions, and AGM-154C, which adds a terminal imaging infrared seeker and a two-stage *Broach* warhead.

### HARM (High-speed Anti-Radar Missile)

HARM is the standard anti-radar missile in the U.S. inventory. It's used as both a strike-protection and anti-ship weapon. First deployed aboard USS *Kitty Hawk* (CV 63) in January 1984, it was first used in combat in April 1986 during raids on Libya.

## HARPOON/SLAM-ER

The *Harpoon* and Stand-Off Land Attack Missile - Expanded Response (SLAM-ER) missiles are derivatives from the original *Harpoon*, that was conceived in 1965.

### *Harpoon*

The *Harpoon* Block 1C is an air or surface-launched, anti-ship, all-weather cruise missile which employs an autonomous active radar seeker to attack a wide variety of surface ship targets from standoff ranges. The *Harpoon*, which entered service in 1977, is currently carried by F/A-18 and P-3C aircraft as well as a portion of the DDG 51 and CG 47 surface ship classes for the U.S. Navy.

Numerous air, surface and submarine platforms currently deploy *Harpoon* for 27 Foreign Military Sales (FMS) international customers. *Harpoon* Block III is a retrofit kit currently under development to add a Network Enabled Weapon (NEW) datalink and GPS guidance to provide target selectivity to the combat proven *Harpoon* missile.

### Stand-Off Land Attack Missile - Expanded Response (SLAM-ER)

SLAM-ER is an upgrade to the SLAM missile which adds *Tomahawk* derivative planar wings to increase flight range to more than 150 nautical miles and a titanium warhead for increased hardened target penetration. SLAM-ER also includes software improvements which allow the pilot to precisely select a target

impact point from a cockpit display of the infrared image of the target. Improved mission planning is provided to simplify and shorten operator mission planning timelines.

SLAM-ER is used to attack critical nodes of high value fixed and relocatable land targets as well as surface ship targets underway or pier side. SLAM-ER is currently deployed from F/A-18 and P-3C aircraft and is planned for the P-8A aircraft. SLAM-ER is currently in production for foreign military sales (FMS) international customers.

### **Maverick**

The *Maverick* is a short-range, air-to-surface, tactical missile. The version used by the Navy carries a warhead designed to penetrate large, hard targets. First deployed in August 1972.

### **TOMAHAWK Cruise Missile**

An all-weather, ship- or submarine-launched, cruise missile. *Tomahawks* have proven to be highly survivable weapons due to their low radar detectability and terrain/wave-skimming flight. First deployed in 1986.

The *Tomahawk* Land-Attack Missile (TLAM) is an all-weather subsonic cruise missile that can be fired from surface or submarine launch platforms. The *Tomahawk* carries a nuclear or conventional payload. The conventional, land-attack, unitary variant carries a 1,000-pound-

class warhead (TLAM-C) while the submunitions dispenser variant carries 166 combined-effects bomblets (TLAM-D). The Block III version incorporates engine improvements, an insensitive extended range warhead, time-of-arrival control and navigation capability using an improved Digital Scene Matching Area Correlator and Global Positioning system (GPS) – which can significantly reduce mission-planning time and increase navigation and terminal accuracy.

The *Tomahawk* was used operationally for the first time during Operation *Desert Storm*. *Tomahawks* were fired against targets in Afghanistan in October 2001 during Operation *Enduring Freedom*. During Operation *Iraqi Freedom* in March 2003, 802 *Tomahawks* were fired against Iraq.

*Tomahawk* Block IV (TLAM-E) or “Tactical *Tomahawk*,” has capability enhancements that include (a) increased flexibility using two-way satellite communications to reprogram the missile in-flight to a new aimpoint or preplanned mission, send a new mission to the missile en route to a new target and missile health and status messages during the flight; (b) increased responsiveness with faster launch timelines, mission-planning capability aboard the launch platform, loiter capability in the area of emerging targets, the ability to provide battle-damage indication in the target area and the capability to provide a single-frame image of the target or other area of interest along

the missile flight path; and (c) improved affordability: Full-rate production of the Tactical *Tomahawk* began in July 2004.

### **ANTI-AIR WARFARE (AAW) AIR-CRAFT GUNS M-61-A1**

This 20mm Gatling gun, which also forms the basis for the *Phalanx* Close-In Weapons System (see “Anti-aircraft Warfare” section), is mounted aboard the F/A-18 *Hornet*.

### **SURFACE-TO-AIR MISSILES**

#### **RIM-116 Rolling Airframe Missile (RAM)**

Developed jointly with the Federal Republic of Germany, RAM provides ships with a low-cost, self-defense system against anti-ship missiles and asymmetric air and surface threats.

#### **Standard Missile**

*Standard* Missile 2 (SM-2) is the Navy’s primary surface-to-air defense weapon. It is an integral part of the *AEGIS* Weapons System aboard *Ticonderoga* and *Arleigh Burke*-class destroyers. SM-2 MR (Block III, IIIA, IIIB)

### **AIR-TO-AIR MISSILES**

#### **Advanced, Medium-Range, Air-to-Air Missile (AMRAAM)**

An all-weather, all-environment, radar-guided missile developed as a

follow-on to the *Sparrow* missile series. *AMRAAM* is smaller, faster, lighter and has improved capabilities against very low-altitude and high-altitude targets in an electronic countermeasure environment. Its active radar, in conjunction with an inertial reference unit and microcomputer system, makes the missile less dependent on the aircraft fire control system enabling the pilot to aim and fire several missiles at multiple targets.

The *AMRAAM* is a result of a joint U.S. Navy and U.S. Air Force development effort and is in service with numerous NATO and Allied countries. The *AMRAAM* was deployed in September 1991 and is carried on the F/A-18 *Hornet*.

#### **AIM-54 Phoenix Missile**

The *Phoenix* missile is the Navy’s only long-range, air-to-air missile. The missile is designed for use in all-weather and heavy jamming environments. The improved *Phoenix*, the AIM-54C, can better counter projected threats from tactical aircraft and cruise missiles.

#### **Sparrow/Sea Sparrow**

A highly-maneuverable, all-weather, beyond-visual-range, semi-active radar homing air-to-air missile used by the United States, NATO and other allied forces. Current air-to-air versions are carried on the F/A-18 aircraft.

In a shipboard version, the *Sea Sparrow*, provides U.S. Navy and NATO ships



with an effective, anti-air weapon. First deployed in 1958, numerous models and upgrades have occurred to the *Sparrow* missile family.

### Evolved *Sea Sparrow* Missiles (ESSM)

The first Evolved *Sea Sparrow* Missile (ESSM) was delivered to the fleet in late 2002. The new missile provides the primary air defense for capital ships of 10 nations participating in the program.

### *Sidewinder*

The *Sidewinder* is a short-range, infrared, within visual range air-to-air missile used by the United States, NATO and other allied nations. The missile has been through a number of modernizations and the current fleet weapon is the AIM-9M. The missile is an all-aspect, heat-seeking missile with improved capabilities against countermeasures.

A major modification to the AIM-9M *Sidewinder* is the AIM-9X. The AIM-9X is a joint U.S. Navy and U.S. Air Force program that upgrades the missile with a staring focal plan array in the seeker, and extremely agile airframe and state-of-the-art signal processors resulting in enhanced target acquisition, missile kinematics and improved infrared counter-countermeasure capabilities. The missile's high, off-bore sight capability can be coupled to a helmet-mounted cueing system that will revolutionize the way that air-to-air missiles are employed. The *Sidewinder* is currently deployed on the F/A-18, AV-8 and AH-1 aircraft.

## SHIPBOARD GUNS

### MK 45 – 5-inch 54/62 caliber gun

This fully-automatic naval gun provides surface combatants accurate naval, gunfire against fast, highly-maneuverable, surface targets, air threats and shore batteries during amphibious operations.

### MK 38 – 25 mm machine gun system

This single-barrel, air-cooled, heavy machine gun is effective up to 2,000 yards (Mod 2). The stabilized Mod 2 was developed in 2003 to improve ship self-defense and meet the needs of ships throughout the fleet, especially those operating in the Persian Gulf.

### MK 75 – 76mm/62 caliber, 3-inch gun

Best suited for use aboard smaller combat vessels, the MK 75 features rapid fire capability with low manning requirements. The gun was approved for fleet use in 1975 and was first deployed aboard USS *Oliver Hazard Perry* (FFG 7) in 1978.

### *Phalanx* Close-In Weapons System (CIWS)

The *Phalanx* CIWS combines a 20mm Gatling gun with search and tracking radar to provide surface ships with terminal defense against anti-ship missiles. The system underwent operational tests and evaluation aboard USS *Bigelow* (DD 942) in 1977 and went into production in 1978 with the first systems installed aboard USS *Coral Sea* (CV 43) in 1980.

*Phalanx* automatically detects, tracks, and engages air warfare threats while the Block 1B's man-in-the-loop system counters emerging littoral warfare threats.

## ANTI-SUBMARINE WARFARE (ASW) TORPEDOES


### MK 46

The MK 46 Mod 5A(S) torpedo achieved its initial operational capability and was introduced into the fleet in 1979. It can be launched from fixed and rotary wing aircraft and surface combatants VLA and torpedo tubes. Full-up MK 46 torpedoes are no longer being produced. In 1987, a major upgrade program enhanced the performance of the MK 46 Mod 5A(S) in shallow water.

A service life extension program was initiated in 1992 to extend the life of the MK 46 Mod 5A(S), convert it to the MK 46 Mod 5A(SW), and to provide additional shallow water and bottom avoidance modes. The MK 46 Mod 5A(SW) was introduced to the fleet in 1996.

### MK 48

The MK 48 heavyweight torpedo is used solely by submarines and is employed as the primary ASW and anti-surface ship weapon aboard attack, ballistic missile and guided missile submarines. Developed by the Applied Research Laboratory, Pennsylvania State University and Westinghouse Electric Corporation, Baltimore, the MK 48 and its subsequent variants have been in service with the Navy since 1972.



USS *Benfold* (DDG 65) fires a missile during training exercise *Stellar Daggers* in the Pacific Ocean. *Benfold* engaged multiple targets with *Standard Missile-2* (SM-2) Block IIIA and modified SM-2 BLK IV missiles.

U.S. Navy photo

# Weapons

Its latest version, MK 48 Mod 7 Common Broad Advanced Sonar System (CBASS) torpedo is optimized for both deep and littoral waters and has advanced counter-countermeasure capabilities.

## MK 50

The MK 50 is a highly capable undersea weapon for U.S. Navy aircraft and surface ships. It is an advanced lightweight digital torpedo designed for use against faster, deeper-diving and more sophisticated submarines.

The stored chemical energy propulsion system develops full power at all depths and is capable of multi-speed operations required by the tactical situation. Although full-up torpedoes have not been produced since 1993, the Block I software upgrade program has enhanced the MK 50's shallow water and countermeasure capability.

## MK 54

The MK 54 "MAKO" Lightweight Torpedo integrates existing torpedo hardware and software from the MK 46, MK 50 and MK 48 with state-of-the-art commercial-off-the-shelf digital signal processing technology. It incorporates an advanced guidance and control section and tactical software improvements to significantly increase shallow water counter-countermeasure capability at reduced lifecycle costs.

## MINES

### MK 67 Submarine Launched Mobile Mine (SLMM)

Based on the MK 37 torpedo, the SLMM is a submarine-deployed mine used for covert mining in hostile environments. The MK 67 began active service in 1987.

### Quickstrike

The *Quickstrike* is a family of shallow water, aircraft-laid mines used primarily against surface ships. The MK 65 mine is a thin-walled mine casing. MK 62 and MK 63 mines are converted, general purpose bombs. All were approved for service use in the early 1980s.

## MK 56

The MK 56 aircraft-laid, moored mine is primarily an ASW mine (the oldest still in use). It reached initial operating capability in 1962.

*(Sources: Naval Sea Systems Command and Naval Air Systems Command)*

AO2 Denny Gardner, assigned to Strike Fighter Squadron 192, inspects a Captive Air Training Missile on an F/A-18C *Hornet* aboard USS *George Washington* (CVN 73) during ANNUALEX 21G, a yearly bilateral exercise with the U.S. Navy and the Japan Maritime Self-Defense Force.

Photo by MCSN Rachel N. Hatch





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